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January 1952

house+home

edition

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What lies ahead for home building	Hotter competition, industrialization, far better houses (p. 138)

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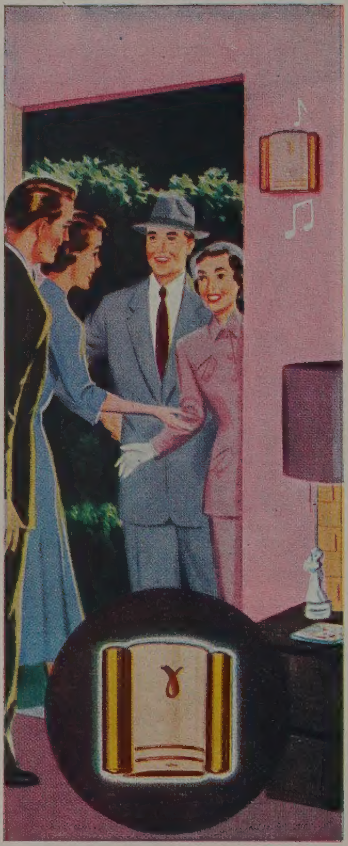

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THE MAGAZINE OF BUILDING

house+home

edition

January, 1952

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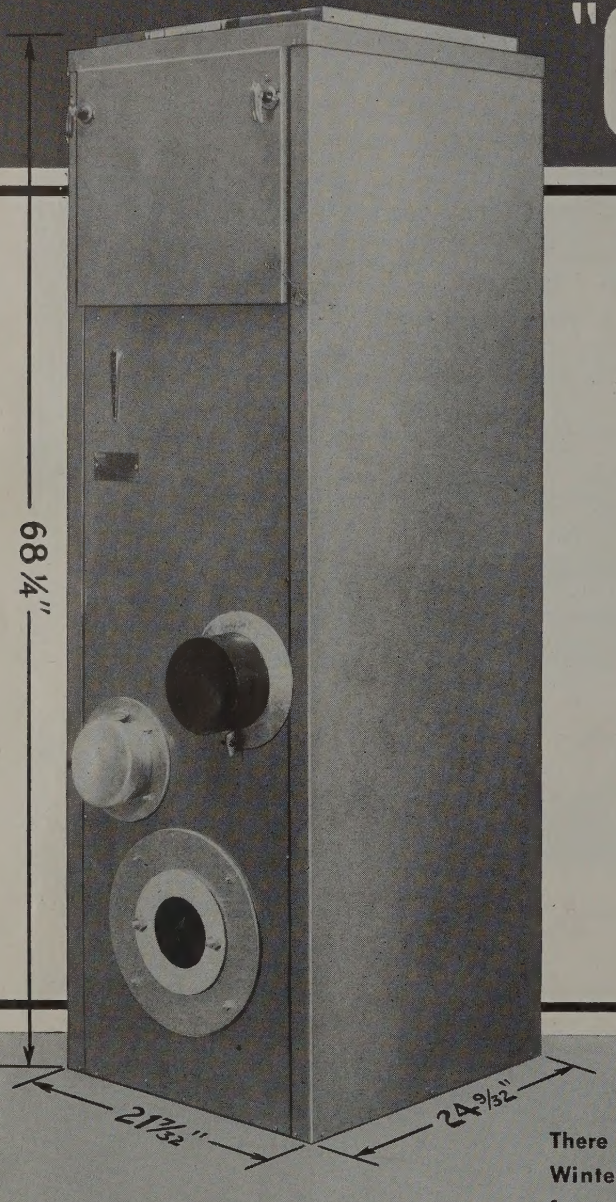
Kaustine *Presents...*

The JERSEY 75 OIL-FIRED "COUNTER-FLO"



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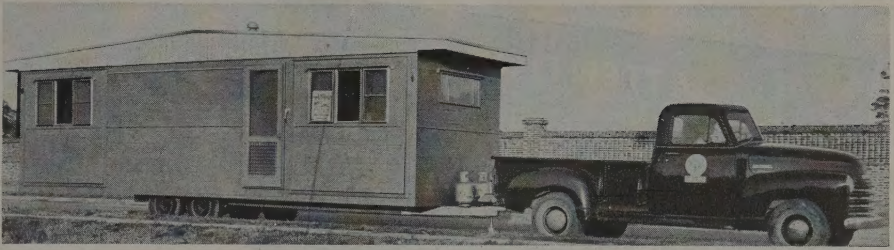
The Missing Pages In This
Volume Are Advertisements

TEMPORARY DEFENSE HOUSING planned by HHFA (and designed by PHA) will be almost identical with late-model World War II temporary above, including plywood panel and batten exterior, flat roofs. PHA hopes units will be 90% salvageable when moved to new location. For more livable temporary, see picture at right.

Morgan Fitz



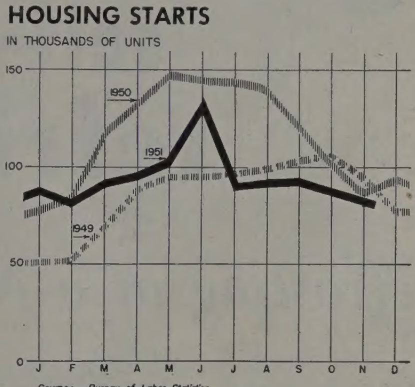
MOBILE EXPANDABLE PREFAB, which begins to bridge the gap between trailers and permanent housing, was unveiled last month by Knox Corp. of Georgia. Designed by Engineer Carl V. Bergstrom, the mobile house is small enough (32′ x 8′) to be towed to its site after factory assembly on a dolly requiring only one lane of highway. At site, a two-man crew jacks house up from dolly, lowers it on piers, pulls out two living room and two bedroom bay extensions (each 3′8″ x 9′3″). Biggest model, eligible for FHA Title I financing, has 400 sq. ft., sells for $4,990 fob factory, including two beds, living room couch, built-in dining table and four chairs, refrigerator, gas stove and 25,700 Btu oil heater.

New Mortgage Crisis Confronts Reviving Defense Homes Program

Just as the defense housing program began struggling to its feet, the Dec. 31 expiration of Federal National Mortgage Association's power to grant prior commitments on defense housing mortgages threatened to knock the program flat on its back again. Except in the handful of critical defense areas along the northern Atlantic seaboard, a shortage of mortgage money was still hampering defense building. A few New York banks and big insurance companies were buying FHA Title 9 defense housing loans, but on a selective basis. Typical attitude of most lenders was voiced by T. L. Bradford Jr., vice president and treasurer of Southwestern Life Insurance Company in Dallas: "We're not interested. The amount of the loans is too small. The return is too small. Also, most defense housing areas would be poor if it weren't for the defense program." Fanny May's prior commitment power was the crutch that had propped up defense housing so far. Editorialized Publisher Edwin J. Paxton of the *Paducah Sun-Democrat:* "The one reason why more homes and apartments have not been built is that builders must take too much risk and are not offered sufficient inducement to invest their capital." Renewal of FNMA's prior commitment authority was up to Congress. If legislators dallied even a few weeks, the defense housing program probably would bog down again.

Signs of life. Although HHFA's initial defense housing program (March to November) had flopped, signs multiplied last month that the new program made possible by the 1951 Defense Housing Act was gathering encouraging momentum. The program (in which Fanny May's expiring power is a serious flaw) was far from hitting on all cylinders, however. A survey in 27 of the 108 critical areas by House & Home correspondents produced this picture:

▶ In Paducah, Ky., second oldest critical area, only 226 of the 1,000 defense homes programmed for 1951 were built or abuilding, and *less than 60 of these had actually been sold to defense workers* under relaxed credit terms. (Most workers had too little cash for down payments.) Biggest trouble: in July, FHA unexpectedly banned septic tanks in McCracken County's hard clay soil, and Paducah city officials have sidestepped extending their sewer and water systems on the ground they are overloaded already. Congress voted only a niggling $15½ million to expand such defense area community services, and, as Paducah Mayor Stuart Johnston observed: "The forms to apply for a share of it were available only two weeks ago." Yet as the year reached its dismal end, Robert E. Rose, assistant to the project chief of the AEC's $500 million gaseous diffusion plant under construction there, declared: "We believe we are on the way to getting the major part of this housing thing licked." Rose's optimism sprang from four projects, still on paper but slated to give Paducah 788 moderate rent apartments. (In 1951, not a single programmed rental unit was built.) The biggest project, sponsored by Midwest Mortgage Co. of Louisville, will be a 500-unit Wherry Act subdivision (which technically won't count as defense housing). An FHA Section 207 project of 84 two-bedroom walk-up apartments ($65 to $75 a month) will be built by 34-year-old Walker Hall of Louisville. On file with FHA in Louisville was a proposal by Paducah radio station owner W. Prewitt Lackey and Omer Goetz of Evansville, Ind., to build 76 Gunnison duplexes under Section 903 (rents from $75 to $85 a month). Builders Jack Haralson and J. W. Pilley of Memphis had applied to build 128 two-bedroom units under Title 9. This firm last year abandoned a similar rental project because there was no Title 9 crutch.



Source: Bureau of Labor Statistics

Housing starts reached the impressive mark of 6 million units since V-J Day, with 1951's first 11 months contributing 1,022,600. Last year's performance (except for June's public housing bulge) was probably the most normal and stable since the war's end, with less variation from month to month than in other hectic years. FHA commitments for 1951 were down 24% from last year's, while VA's were up 28% as builders flocked to higher loans permitted by VA.

▶ At the Savannah River AEC plant, Arthur L. Tackman, assistant to the manager, observed: "Generally the housing outlook is much better than it was six months ago." Only 150 of the 1,150 defense houses programmed last year were actually being built but builders responded to the new 3,600 unit program announced October 19 with 30,519 applications. Said Area HHFA Representative McClellan Ratchford: "Apparently builders are going to be able to proceed because financing is available under Fanny May."

▶ In San Diego, only six of the 6,000 houses scheduled last spring were under construction—the worst fiasco of the entire program. But builders eagerly oversubscribed the new program of 9,000 units. House & Home's San Diego correspondent wired: "Everyone concerned seems more optimistic now over the success of the program, and it is believed a large amount, if not all of the 9,000 units, actually will be built."

▶ Idaho, where three towns were critical areas because of AEC's reactor plant under construction, remained the bright spot in the national picture. Of the 300 programmed units in Idaho Falls, Builder Robert F. Johnson's Bel-Aire Building Co. had completed 178 rental units *(see cut, p. 40)* and would break ground on the remainder, 122 sales units, as soon as the spring thaw arrived. In nearby Arco and Blackfoot, however, FHA had been unable to interest anybody in building 50 programmed units.

DEFENSE HOUSING BOX SCORE

On Dec. 4, HHFA tabulated the status of its defense housing program as follows:

Units programmed	58,855
Units applied for	62,625
Approved	19,240
Started	1,581*
Completed	152*

* A later check by House & Home in only 27 of the 108 critical areas showed 1,903 units started and 453 completed.

NEWS continued on p. 42

ATTENTION,
HOME AND
APARTMENT BUILDERS!

Here is KELVINATOR'S revolutionary new "Magic Cycle" self-defrosting refrigerator!

Automatic Defrosting at a New Low Cost!

Get today's newest, most advanced *self-defrosting* refrigeration—at today's lowest cost!

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*Patent applied for.

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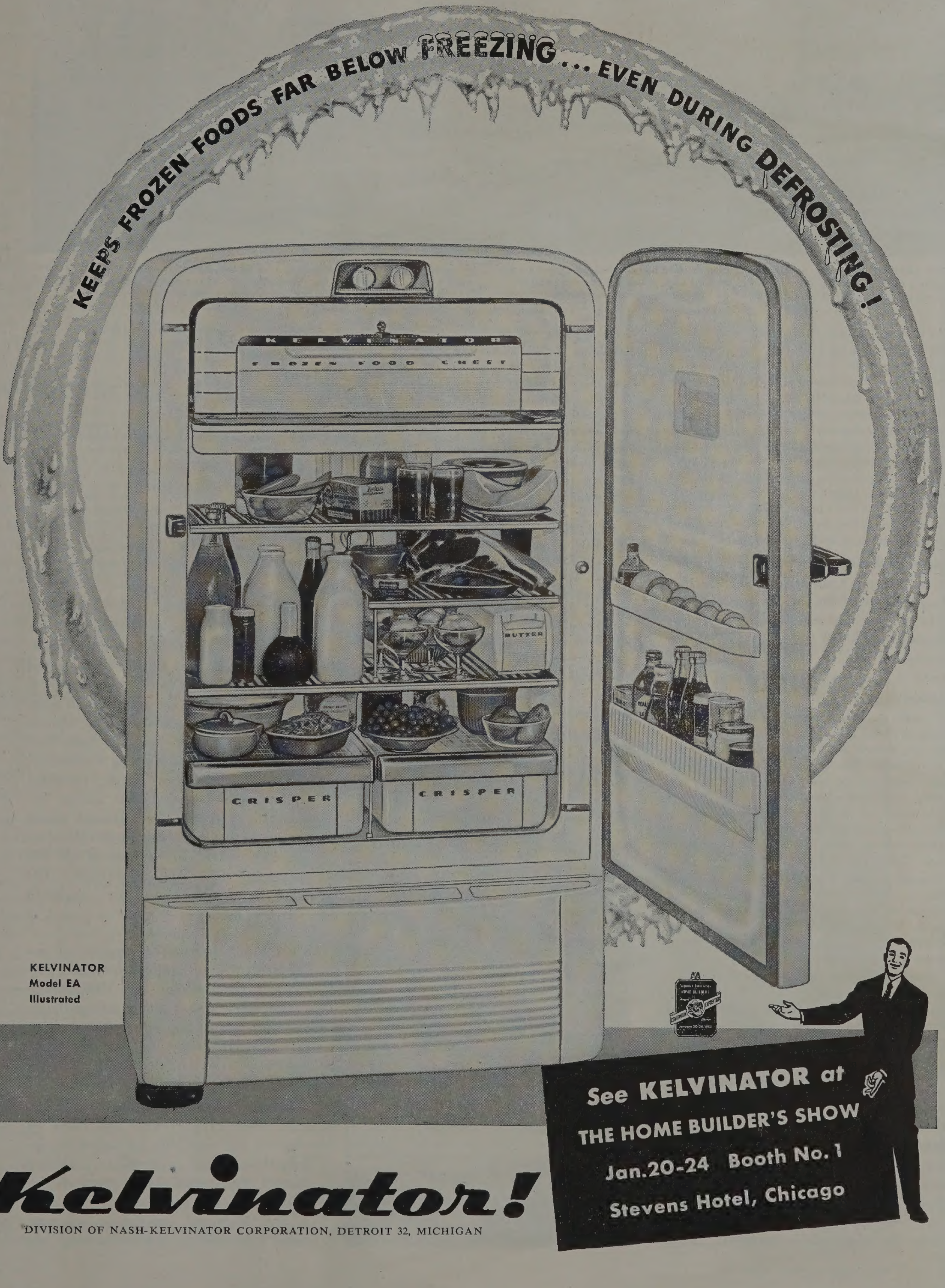
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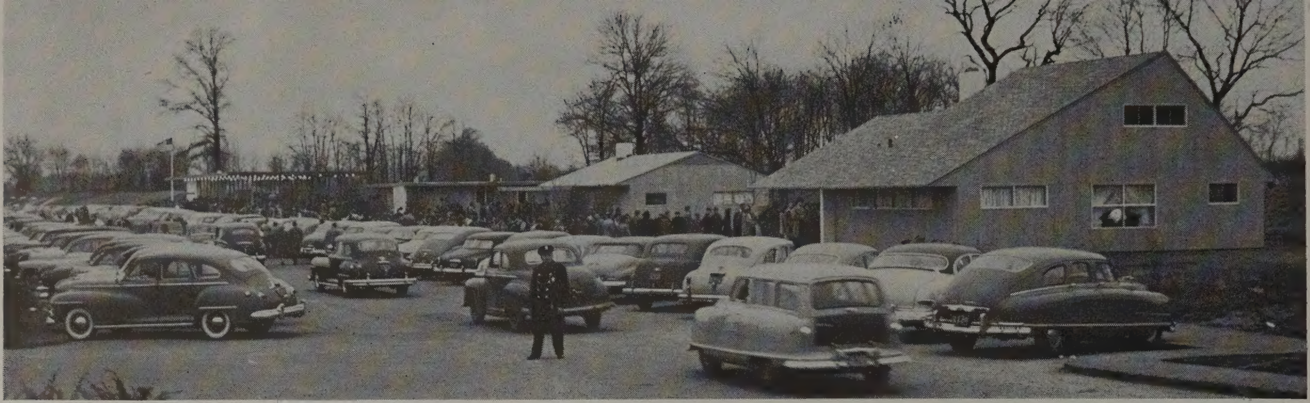


NEW LEVITTOWN: Just before Christmas is considered the worst time of year to open a housing development. But on Dec. 8 and 9, a crowd of 50,000 converged on Levitt & Sons' sales office and three model homes opened on the site of the new Levittown to rise in the Bucks County, Pa. critical area near new U. S. Steel plant. More than 200 of them paid deposits on $2 million worth of homes. Public's interest centered on $9,990 model.

- In Colorado Springs, seven months after a 1,000 unit program was unveiled, only one builder had begun to construct any homes for sale, and no ground had been broken at all for rental housing. Builder Robert Alexander had completed 89 prefab National homes, had another 26 under construction and planned to apply for the rest of the 500 sales units programmed when they come up for reallocation this month. Alexander plans to steer clear of rental units. Said he: "It just isn't possible to make a profit on well built rentals going for $55 to $70 a month unless they are built on a huge scale—say 1,000 units—and have plenty of financing back of them."

Faster without planners. Biggest irony in the defense housing program was that *nonprogrammed* housing in almost every defense area was rising faster than programmed housing. This was one of the intricacies sure to keep the public and much of Congress from understanding the muddle.

Sample: In Bucks County, Pa., where housing needs probably were being best met of any critical area, none of the 1,100 Gunnison prefabs put up by Realtor John Galbreath or the 1,000 units sold (but not yet built) by Builder William Levitt were programmed housing. This meant they would have to charge higher down payments than other builders who might come under the HHFA program later. Neither could they finance under Title 9.

Sample: In San Diego, builders who were unable to cope with the red tape and low price ceilings of HHFA's defense housing managed to put up 12,500 homes last year, an alltime record. Average sales price: $11,500 to $12,500. Rental range: $75 to $135 per month.

Sample: Around the Savannah River AEC plant where only 150 *programmed* homes were under construction, AEC estimated between 500 and 600 *nonprogrammed* houses had been built or started, priced anywhere from $6,000 to $16,000.

Sample: In Wichita, Kan., where 600 of 2,500 programmed houses were under construction, *twice as many* nonprogrammed houses were rising, even though unsold new homes were plentiful.

Boon or bane? The Mortgage Bankers Association weighed the advantages and disadvantages to a community of being declared a critical area, concluded that the "aids" are mostly "dubious or illusory" while the dangers are multiple. MBA warned its members:

- Granting of "specially favorable terms" to programmed housing gives an unusual competitive advantage to a limited portion of the market, may adversely affect the remainder and result in a lower total volume of building. Moreover, actual prohibition of nonprogrammed housing in defense areas is a logical next step if conditions get really tough.
- Even if Congress boosts Fanny May's kitty, "it is doubtful" Fanny May can be counted on "to meet all requirements" for defense housing financing.
- Critical defense area designation "will almost certainly bring rent control in its trail" *(see p. 59)*. The defense brand of rent control includes all new construction built since February '47 and all construction added throughout the duration of rent legislation.
- The critical area tag may create "an air of instability" which will deter new industry from entering the area, and frighten off normal mortgage funds.

Back to temporary. Last month HHFA decided to make its major defense housing effort around military bases, where Congressional probers had found worst rent gouging. It earmarked $11.5 million of its none-too-generous $25 million kitty for public defense housing to buy 2.815 temporary housing units for 14 Air Force and Navy bases. The program:

Defense Area	No. and Type
Air Force	
Mountain Home, Ida.	400 prefab demountable
Presque Isle-Limestone, Me.	300 prefab demountable
Topeka, Kan.	250 trailers
Marysville-Yuba City, Calif.	250 trailers
Clovis-Portales, N. Mex.	90 trailers
Pleasanton-Livermore, Calif.	250 trailers
Navy	
Norfolk-Portsmouth, Va.	225 prefab demountable
Key West, Fla.	100 trailers
San Diego, Calif.	350 trailers
Barstow, Calif.	60 trailers
Camp Lejeune, N. C.	260 trailers
Solano County, Calif.	100 trailers
Bremerton, Wash.	120 trailers
Bainbridge-Elkton, Md.	60 trailers

IDAHO FALLS defense housing tract built by Robert F. Johnson consists of two- and three-bedroom detached homes renting from $70 to $90 a month.

HHFA's aim was to make sure temporary housing was so temporary it would not remain to blight postdefense communities. Hence trailers, which will be parked on military posts. Official explanation was that demountables were scheduled for spots with such rigorous climates that trailers would not do. But this hardly fitted Norfolk, Va. The Public Housing Administration, handed the job of buying, estimated trailers would cost $3,000 apiece, demountables $5,000. With similar grants for five Army bases involving 800 portables and 550 trailers, $19 million of the $25 million for public housing was gone. The building industry generally approved HHFA's plan.

More public housing? Congress had authorized a $50 million total for direct government construction, and HHFAdministrator Foley seemed sure to ask legislators to appropriate the other $25 million promptly. He might even ask for more. Getting it would be hard with Congress anxious to trim non-military spending.

Despite HHFA's good intentions on design, when PHA revealed the plans on which it will seek bids for temporary demountable units, horrified architects thought they looked almost identical with World War II's worst eyesores *(see cut, p. 39)*. Moreover, government men wondered how military families moving into these quarters for short stretches could be expected to buy furniture.

Wanted: handsome tempos. Needed was a removable house (about 90% salvageable and built of wood) that had a quality look, topflight design, and amortization over its complete life including one or two removals. If builders or prefabbers did not produce it, the trailer coach industry might. One industry probably would invade the other in the next few years.

For the moment, danger signals were appearing that the U. S., dedicated to rearming in comparative luxury for all, might be building more housing for military personnel than low-paid military personnel can afford to buy or even rent. At Selfridge Field, Mich., the Air Force found to its surprise that 237 units for enlisted men in its $5 million Wherry Act Vandenberg Village were only 40% occupied. Explained Col. George S. Brown, base commander: "Project rentals were $60.50 a month for one-bedroom units, $70.59 for two-bedrooms and $77.59 for three, while rental allowances for top-ranking noncoms were only $67.50 and most of them can't afford the double load of furniture payments at that scale." Temporarily, the Air Force filled up the enlisted quarters with officers. In Alamagordo, a contractor who built 20 houses couldn't sell them to the military personnel who are supposed to need them. After the 60 day waiting period, he sold them to the public.

California Architects, Builders Say FHA Valuations, MPRs "Encourage Mediocre"

Among FHA's 72 district offices, Los Angeles is often singled out by FHA critics as one of its most laggard at keeping pace with better design and new technology in home building (April issue '51). Individual builders and architects who have to deal with FHA's civil servants are often afraid to criticize them for fear of trouble on their next job. But last month the architects and builders of L. A. sought safety in numbers to release a joint blast in the name of the southern California chapter of AIA and the Los Angeles' Home Builders' Institute.

Their six-page letter listed 14 specific gripes, backed up with 27 specific suggestions for revisions in FHA Minimum Property Requirements. Their major complaints:

- "Your valuation technique indirectly encourages the mediocre." FHA should recognize that "a well designed and well executed house in a lower price range is a difficult problem which both challenges and taxes the training, ingenuity and capabilities of the most experienced and capable professionals in the field," should raise its valuations for "better than average planning."
- FHA lot valuations have not kept pace with rising cost of raw land, labor and materials, nor increasing requirements by local authorities.
- Personal opinions color valuations and many are "unduly depreciated" because of an individual's belief as to what constitutes "good design, good planning, proper use of materials." FHA hesitates to "fully value" modern design and open planning.
- FHA calculations of replacement costs of a house (which sets a ceiling on any FHA insurance) "combine the low overhead of the small builder with the labor efficiency and buying power advantages of the volume builder," so both are penalized.
- "Your replacement cost procedure encourages and indirectly rewards the mediocre in selection of materials, accoutrements and equipment [by not giving] appropriate credit for better than the minimum."
- Replacement cost formula does not allow for "top design talent." It should.
- "A more liberal and open-minded approach to the eligibility and value of properties involving 'new thinking' will be a great assistance to the improvement of housing standards and conditions. We suggest conditional commitments to insure when sold . . . where public acceptance must be established."
- Burned by experience, Los Angeles home builders now feel that "freshness" in design is not recognized by FHA evaluators. Sometimes, it brings "outright penalties from the economic side, and the imposition of design from your staff in conflict with the basic concept of the architect or designer. *Many home builders admit to having frozen their designs to a particular plan, series of elevations, and combinations of materials that produce the most favorable commitment, irrespective of how obsolete the basic concept may be.* Such frozen houses usually sell readily because they usually enjoy more favorable terms, but let the terms be equal and the public's recognition of the obsolete is immediately established."
- FHA house valuations in the Los Angeles area are frequently $1,000 below conservative uninsured appraisals on 1,000 to 1,100 sq. ft. homes, another $500 to $1,000 below uninsured appraisals on the lots. Thus more and more conventional lenders offering to lend only 66% of the value of a house and lot are stealing business from FHA which presumably offers an 80% loan. This "in effect cancels out the fundamental objectives of the FHA insured mortgage program."
- "Your inspectors and executive personnel alike are inclined to establish personal criteria either outside of or as interpretations of the minimum property requirements. Frequently, these 'personal opinion requirements' are not based upon the latest technical findings, current experience, general public acceptance, or related to basic mortgage security."
- There is no sound reason why California needs more than one set of MPRs. Climate and local conditions are too uniform.
- FHA does not advise architects, builders or the public when it changes its MPRs. Changes should be publicly announced in advance, applied only to homes on which commitments are issued after the changes become effective.

Among the 27 specific suggestions the architects and builders made were these:

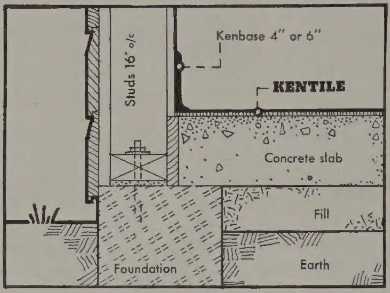
Windows should not be mandatory in interior

Ankers

NAHB-FHA CONFERENCE on revising Minimum Property Requirements manuals last month in Washington found builders complaining against "unreasonable" FHA rules like paved drives for houses without garages, expensive waterproofing in areas where rainfall is slight, reinforcing mesh in concrete slabs on grade irrespective of soil conditions. Assistant FHA Commissioner Curt Mack and NAHB Technical Director Carl Lans (fourth and fifth from right) agreed that local builders, local FHA officials should form committees to revise FHA's 54 MPR manuals. Deadlocks will be settled in Washington. Builders were disappointed that FHA rejected suggestion that it insure a few "demonstration houses" where local FHA office vetoes a design on ground public won't accept it. Another disappointment was FHA refusal to approve inside bathrooms and kitchens with back-to-back plumbing for low cost slum replacement multi-family apartments, despite fact that even ritzy hotels usually have inside baths. Builders claimed such design would save about $870 per unit, permitting $9 per month cheaper rents.

NEWS continued on p. 50

There's a Kentile Flooring Product for every flooring need... every flooring budget

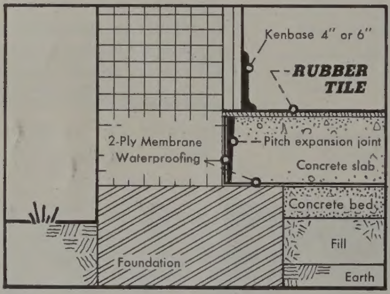


KENTILE ASPHALT TILE—is made of asbestos, coumarone indene resins, plasticizers and color pigments.

It is a low-cost, long-lasting floor available in 26 modern colors and a wide range of decorative inserts. Colors go all the way through the tile...can't wear off...and the smooth surface is dirt, stain, scuff and wear resistant for easy, economical maintenance.

Kentile can be installed over any smooth interior floor that is free from spring, oil, grease, lumps or foreign matter...even over concrete below grade in direct contact with the earth.

Prices range from 20¢ per sq. ft. to 40¢ per sq. ft. depending on which of the two thicknesses, 1/8" or 3/16", is chosen and which of the 4 color groups is specified.

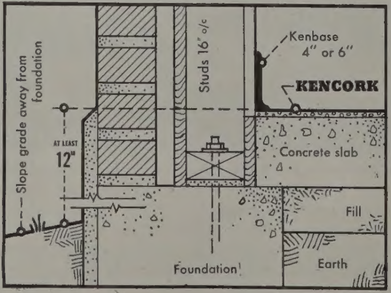


KENTILE RUBBER TILE—is made by vulcanizing synthetic rubber and pigments.

The resilience of rubber absorbs shock and provides quiet and comfort underfoot...and only Kentile Rubber Tile is available in lighter, brighter colors and exclusive "customized" decorative inserts. It is dirt, stain and scuff resistant to provide years of life under conditions of heavy daily use. Easy maintenance preserves all of the colorful beauty and sparkling luster.

Kentile Rubber Tile can be installed over any smooth interior surface that is removed from greases and oils...even over concrete in direct contact with the earth if waterproofing membrane is used to prevent capillarity (if there is a static head more plies may be required).

Prices range from 65¢ per sq. ft. to 80¢ per sq. ft. depending on which of the two thicknesses, 1/8" or 3/16", is chosen and which color group is specified.



KENCORK CORK TILE—is made of pure cork...with no artificial binders...compressed under heat and pressure to a fraction of its original bulk.

The quiet dignity of nature's random tones of rich nut brown add distinction and beauty to floors and walls in any interior...can be maintained easily...wears for decades. And, Kencork's natural resilience provides warmth, quiet and comfort underfoot yet costs less and lasts longer than wall-to-wall broadloom.

Prices range from 65¢ per sq. ft. to 80¢ per sq. ft. depending on which of the two thicknesses, 3/16" or 5/16", is chosen.

For every style of home architecture, there is a Ceco Steel Casement, designed not only to blend harmoniously, but actually to heighten and enhance the individual charm of each style . . . to accent the clean, modern lines of Contemporary and Tri-level architecture . . . to emphasize the spaciousness and informality of the Ranch style home . . . to compliment the simplicity of Cape Cod Colonial . . . or to give added grace to the dignity of the Provincial home.

Yes, there is a Ceco Steel Casement to suit every taste . . . always in *good* taste. Always a *good buy*, too, because Ceco Windows offer every practical advantage. They're precision engineered for the tightest weather-seal . . . are easy to open and close . . . won't stick or warp. They're designed for maximum ventilation control, light, and vision. When you choose Ceco Steel Windows, you know you've chosen the very best . . . you assure your customer's economy, too.

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bathrooms with adequate lighting and ventilation.

FHA-Los Angeles leans toward making a "fetish" of privacy. This flies in the face of the "definite trend" toward multiple uses of space and less partitioning. For instance, a passage hall in one-bedroom units "we consider an amenity rather than a minimum requirement."

There is no sensible reason why exterior doors except the main entrance and service entrance must be wider than 2′ 6″.

"Carports should be acceptable" in Southern California's mild, arid climate, if either the carport or the house includes adequate storage space.

FHA's 12″ limit on fill under concrete slab is "unduly restrictive" on sloping lots. One corner or side may "well exceed this depth with safety" if the fill is properly compacted.

FHA's "current policy" of demanding footings under nonbearing partitions in one-story homes is generally "unnecessary."

FHA should fall in line with the government's antiwaste program, permit 1½″ net thickness in studs and joists—a step toward a potential saving of 15% in gross lumber consumption.

FHA's Los Angeles chief underwriter or chief architect has overused his authority to establish requirements for exterior trim. Sample: facia required at "all eaves" can only be "personal preference" because facia are no advantage over exposed rafter for sales appeal, value or safety. Sample: FHA's "widespread requirement" of a 4″ net overhang for rakes bars simpler, more pleasing design treatment. Sample: requirement of 1⅝″ exterior jambs fails to mesh with standard mill output of 1 7/16″ jambs so that builders must either fudge or waste lumber.

While the architects and builders scrupulously avoided saying so in plain words, their suggestions made it plain that many leaders in the home building industry feel FHA rules need a thorough overhaul if the agency hopes to avoid even more embarrassing complaints later.

FHA Fires Puerto Rico Director; House Probers Air VA Scandal in San Diego

Up to last month, government corruption scandals had left federal building officialdom untouched. Then Sen. Richard M. Nixon (R., Calif.) asked FHA to look into the relations of its Puerto Rico director, Frederick D'A. Carpenter, with Leonard D. Long, the wealthy Charleston, S. C., builder who is deep amid a legal battle with the island government over $1 million in taxes on his 4,428-unit Puerto Nuevo project. (Dec. '51 issue).

Director fired. FHA looked, promptly fired Carpenter on charges of "outside business interests" which conflicted with his government duties, including connections with Long-owned construction companies. Long denied Carpenter had any business ties with him, insisted the Puerto Rico FHA chief was the victim of maneuvering by Long's foe, Puerto Rico Gov. Luis Munos Marin. FHA's answer was disclosure that the FBI is helping investigate Long's Puerto Rico operations. Senator Nixon pointedly suggested that FHA look into his activities elsewhere, too. Clearly threatened was a full-dress Senate investigation, but so far FHA Commissioner Richards seemed to have a chance to head it off.

Pointedly, HHFAdministrator Foley prohibited his staffers in positions to take or influence official action from accepting "any favor, gift, unusual loan or discount, gratuitous service, entertainment or other thing of value" from any person or organization. Exception: common courtesys like a free lunch. President Truman, praising the order, said such a code should be policy for the entire government.

Navy ax. The spotlight of publicity cost William Willett his $11,800 a year job as assistant to Undersecretary of the Navy Francis Whitehair and prospective Navy expert on the armed services housing agency. Willett was ousted as an RFC director last February after the Senate banking subcommittee criticized him severely in its report on influence peddling. But Willett had slipped back onto the government payroll unannounced. When word leaked out, Defense Secretary Lovett demanded his resignation . . .

In San Diego, a select committee headed by Rep. Olin E. Teague (D., Tex.) began investigating VA loan guarantee operations under the GI Bill. They lifted the lid of a virtual Pandora's box. Out buzzed a beautifully interlocking directorate involving a savings and loan association, a collection agency, five housing projects, a contractor, a building company, a fire insurance agency, four VA employees, the wife of one and the stepson of another. The Teague committee heard testimony that:

▶ Wrelton L. Clarke and Alton B. Jackson, until their recent forced resignation as vice presidents of the San Diego Federal Savings & Loan Association, had been swinging their bank's GI loan servicing business to the California Realty & Loan Corp. The latter was run by Jackson, Charles A. Dodge, who, until *his* resignation when the scandal arose, was chief of San Diego's VA loan guarantee division; Francis G. Paige, assistant chief of the VA loan guarantee division; Robert H. Skinner, Paige's stepson; John M. Barber, real estate broker and VA appraiser; and Mrs. Barber. The loan servicing brought the group a $60,000 annual profit. (In defense, Pres. Roy Hegg of San Diego Federal Savings and Loan testified it was not irregular to farm out loan servicing to California Realty and Loan Corp. because his association didn't have facilities to handle collections.)

▶ Clarke, Jackson, Paige, Barber, Mrs. Clarke, Mrs. Ione Hubner, president of the Hubner Building Co. in which Jackson and Mrs. Clarke are stockholders,. and Dana McEwen, La Mes realtor and VA appraiser, were profit sharers i five housing projects: James Park, Plumos Manor, Rolando Homes, Harmon Homes an Grossmont Village.

▶ Clarke and Jackson, while still bank vic presidents, made an agreement with J. W. Ander son Contracting Co. to take a one-third profi from the James Park and Plumosa Mano projects. Questioning Ex Vice President Jackson the committee learned that water softeners whic cost $181.50 each were appraised at $334 in 14 GI homes in Rolando Village.

▶ Grossmont Village, in which Paige had financial interest and which was appraised b Barber and McEwen, showed a $330,000 profit o its 149 houses. Barber confessed this was "out o line."

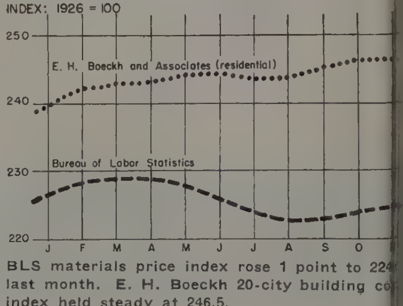
▶ Chris Cosgrove, a bigtime contractor, said h donated $3,000 worth of building materials Paige in building his $25,000 La Jolla home, gav Paige $6,000 over a four-year period because h "could make contacts for financing," obtaine $12 million in loans through Paige's help.

Ten arrests. Under arrest since summe and still awaiting federal trial on briber and fraud charges in connection with th interlocktorate are: Paige, McEwen; Clarke; Jackson, Mrs. Jackson; Charles R Faas. Jackson's brother-in-law; Mrs. Hub ner; John N. Haskell, mortgage and loa company vice president; Warren D. Pierce insurance broker; and James C. Wilbur, non-vet gas station operator accused o buying a veteran's certificate of elegibilit to get a GI loan. (As the hearing ended William E. Berry, VA manager in Sa Diego, recommended legislation to preven such abuses: make both contractors an VA employees legally responsible f carrying out VA construction requirement broaden laws permitting prosecution o federal employees for accepting gratuiti to influence them, tighten prohibition against veterans disposing of any bene under the GI bill.)

MATERIALS PRICES: lumbe recovers slowly after slump

The price picture for housebuilding mate rials was encouraging to the entreprene with a set of blueprints under his ar Lumber, the most important cost comp nent. had skidded in mid-November to $6

BUILDING AND MATERIALS COST



BLS materials price index rose 1 point to 22 last month. E. H. Boeckh 20-city building co index held steady at 246.5.

NEWS continued on p. 59

er 1,000 board feet for 2 x 4 Douglas fir reen dimension, had inched up to a not-oo-dangerous $72 by year's end. Plywood uotations were recovering slowly after heir November 30th smash-up. Cement upplies showed improvement over past amine years. Brick was no problem and nventories of gypsum products were mple.

If you listened hard, you could even hear f price-cutting, reflecting concern over ulging stocks. Better proof that costs were urving downward was offered by the Public Housing Administration's report that ids on public housing projects for the eavily-populated Middle Atlantic states New York, New Jersey, Pennsylvania) had leclined 5% since last spring.

PUBLIC HOUSING: Los Angeles to cancel $110 million contract

ity Councilman Harold Harby of Los ngeles got up to explain why he was hanging his vote: "I find that much of this roposed public housing is not essentially slum-clearance project and buildings will e built on heretofore unoccupied territory. Vhen you remove the slum-clearance element from public housing, there is nothing nuch left but socialism."

With Harby's support, the city council ast month resolved 8-7 to break its $110 nillion contract with the L. A. Housing Authority for 10,000 public housing units. Before the councilmen left the chambers, ublic housers began fighting back, served egal notice they were seeking a mandamus vrit in California's Supreme Court to compel L. A. to go through with the contract. Varned PHA and Los Angeles' Mayor Fletcher Bowron: if the city breaks the contract it is liable for $12 million already pent on sites and plans.

NAHB AWARDS won by five in neighborhood contest

ive new U.S. communities last month on awards of merit—"Oscars" of the ome-building industry—in NAHB's 1951 Neighborhood Development Contest. The udges, Planning Consultant Seward H. Mott of Washington, D.C., Architect Walter . Durham of Philadelphia and Byron R. Hanke, chief of FHA's land planning section, weighted planning and layout 70%, esign 30%. They noted that the 25 entries eflected an "even balance" between conventional and contemporary design. The winners:

- Builder Al Balch's "Wedgewood" tract in Seattle -200 homes priced from $10-$16,000. The jury ommended Balch for "the care taken to preserve xisting tree growth" and making an asset out of sloping site. Architects: Thomas, Grainger & arr and Chiarelli & Kirk.
- "Park Lawn," built by Todd Tibbals of Columbus, Ohio, a rental project (around $72 a month) of two-story, vertical apartments with two to four units per structure. Jurors liked the "generous recreational facilities (swimming pool, softball park, children's playground), the low density of population," said that Architects Tibbals, Crumley and Musson managed a residential flavor "most unusual in rental projects."
- Flat-roofed, contemporary "Ben Hur" estates at La Cañada, Calif., a tract of just under 100 one-story, $14,000-up homes of concrete slabs on rolling hills. Enthusiastic jurors called the "Ben Hur" homes a "good example of a flat-roofed type house which could be easily adapted to use for most any section of the country." They added: "Interior floor plan...is well worth study by builders as it incorporates all of the good points brought out in the NAHB-FORUM competition such as good interior circulation, no waste space, no useless dark halls, and separation of bedroom from family living area." Architect: Charles Henry Burge. Land planners: William H. Fair and Burge & Roach.
- The "Tanglewood" project of $40,000 homes developed by William G. Farrington in Houston, with Consulting Architects Phillip C. Willard, Wilie W. Vale, and others (Oct. issue '46). Jurors thought design showed "commendable variation in use of exterior materials and... roof." but criticized the main entrance for lack of eye appeal and the main boulevard for ending in a dead end half-way through the project.
- The mammoth "Park Forest" development (Aug. issue '48) by American Community Builders, Inc. (Nathan Manilow and Philip Klutznick). Jurors applauded the lot size (60' x 125') as "unusually generous" for Chicago suburbs, commended the butt lots placed at the end of blocks to "break the unsightly view down the interior of the block from homes across the street."

RENT RECONTROL: realtors cry gov't. ignores local desires

Rent recontrol began to run into squalls. Realtors cried that Rent Stabilizer Tighe Wood had clamped on his recontrol straitjacket without consulting local communities and against their wishes in several of the 58 areas recontrolled up to year's end. Trumpeted Secretary Calvin K. Snyder of the Realtors' Washington Committee: "I have conferred personally with officials of the Atomic Energy Commission and the military (in Idaho Falls, Idaho and Rapid City, S. D.) and have evidence that the attempts to control emanated from the ORS office in Washington, against the desires of the communities."

In Colorado Springs, Col. J. E. Mallory, commander of Ent Air Force Base, disclosed that he recommended to Washington two months ago that rent control be kept out of the area at least until June 1952. Rent Stabilizer Woods reimposed full rent controls Dec. 10.

In Norfolk, Va., Fifth Naval District sought a 60-day stay of rent control after Norfolk was designated a critical area in order to give local realtors and builders a chance to try the "Lake Charles plan" for bringing unused living space in large homes onto the market—a plan which, ironically, was devised by Rent Stabilizer Woods himself. The Navy's plea was turned down in Washington.

Mortgage Recovery Slow as Interest Rates Climb; VA Rejects Discount Plan

The mortgage market was not recovering as much as some optimists had hoped. Mobilization's appetite for money was continuing to drive interest rates up. VA and FHA mortgages, their interest frozen at 4 and 4¼%, looked unattractive to managers of investment portfolios who watched yields of new issues of high-grade corporate bonds climb to peaks typified by Westinghouse and Union Carbide financings at 3.5 and 3.75%. Said the vice president of a New York life insurance firm: "Corporates show a better yield today and it is only common sense that investors should put their money into them rather than into FHA and VA loans. The bulk of our funds is going to corporates and the industry generally is putting less into mortgages. It is all a matter of rate." Most experts thought the money demand would keep corporate bond rates up for another six months.

Despite the obvious scarcity of money for VA loans, the VA (after months of internal discussion) rejected the proposal to let builders absorb subsequent discounts that might have to be paid to sell VA loans in the secondary market. The agency blandly explained it was "not necessary." A few days later, with a flourish of ballyhoo, VA put a $95 million batch of its direct GI home loans on the market—at par. Another $48 million worth would follow soon. Few thought VA would find many takers: 4% was still unattractive and most of the direct loans were in remote places where servicing costs are high. If VA cannot sell its direct loan mortgages to make its $150 million direct loan kitty revolve, it soon may have to ask Congress for more money to keep on offering 4% money to veterans who can't get it elsewhere. One thing VA told Congress it did not want was Sen. Burnet Maybank's scheme to tap the $5.6 billion national service life insurance reserve fund to get more 4% money.

NEWS continued on p. 66

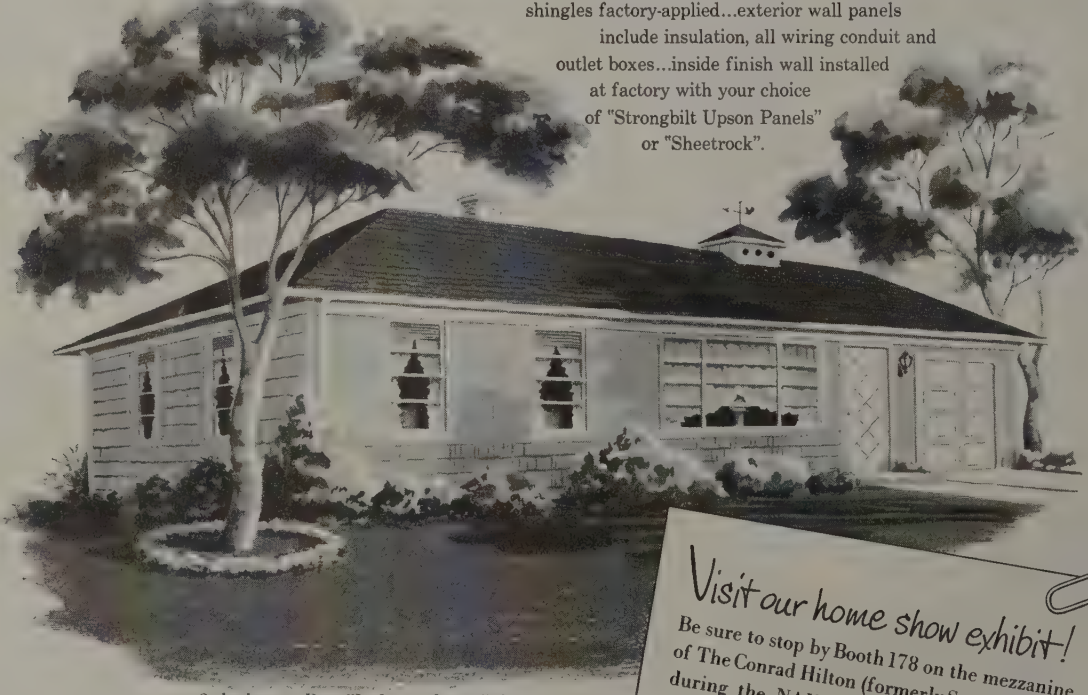
NEW NEW Brand NEW for '52

BEST hip roof home with attached garage

Now...Best dealers have both gable roof and hip roof homes to offer ..both two bedroom and three bedroom..with or without attached garages! Make '52 your biggest year yet with an exclusive Best Home franchise in your community. Best dealerships are available within 500 miles of Peoria, Illinois – in three years dealers have more than *tripled!*

Best 3-bedroom "Independence" *home can be built with 12 possible exteriors, including hip or gable roof, with or without attached garage. Best 2-bedroom* "Security" *offers 16 exterior plans.*

OTHER FEATURES INCLUDE: Standard-size double-hung windows with weather-stripping, balancers, hardware and trim all installed in wall sections...2x4 studs spaced 16 inches on center in all bearing partitions and outside walls...with double course red cedar shingles factory-applied...exterior wall panels include insulation, all wiring conduit and outlet boxes...inside finish wall installed at factory with your choice of "Strongbilt Upson Panels" or "Sheetrock".



3-bedroom Best "Independence" home, now available with hip roof and attached garage.

Visit our home show exhibit!

Be sure to stop by Booth 178 on the mezzanine of The Conrad Hilton (formerly Stevens) Hotel during the NAHB Home Show this month.

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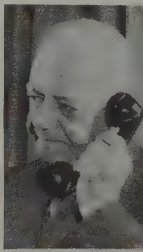
B-21

France's Perret to Get AIA Gold Medal

PERRET

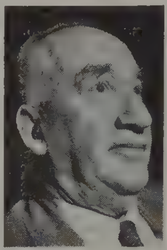
The Gold Medal, the AIA's highest award, will be given French Architect **Auguste Perret** in late June during the AIA's annual convention at New York's Waldorf-Astoria Hotel. Perret, 77, is a pioneer in reinforced concrete construction and perhaps the greatest single influence on Le Corbusier. Perret's works in France have long demonstrated both the versatility of his medium and its drama and delicacy. His Rue Franklin (1903) showed the possibilities of the concrete slab; his Ecole Normale de Musique in Paris was so acoustically perfect musicians dubbed it a "Stradivarius"; his docks at Casablanca introduced the thin concrete slab for roof construction; his Notre Dame Church at Raincy displayed dignity in decoration as well as construction. Currently, Perret heads some of France's prime reconstruction projects, among them the rebuilding of the port and city of Le Havre, leveled by the war. Perret's first visit to the U. S. two years ago was a triumphal tour sponsored by the French government. The University of Illinois held a photographic exhibit of his classicism in concrete.


BAKER

Melvin H. Baker, 66, founder and sparkplug of Buffalo's National Gypsum Co., moved up from the presidency to chairman of the board, his company's first. He will continue as National Gypsum's chief executive officer. Executive V. P. Lewis R. Sanderson was promoted to president. Tennessee-born Baker started National Gypsum 26 years ago when two colleagues who used to sell "beaverboard" with him had options on rich Buffalo gypsum ores. Even during the depression, Baker boosted sales. This year he expects National Gypsum's sales to reach $90 million, nearly half of Sewell Avery's giant U. S. Gypsum.

William Zeckendorf, New York real estate giant, let it be known he is extending his holdings in southern California. Since 1948, Zeckendorf and Robert L. Smith, *Los Angeles Daily News* president, have been quietly buying up 11,600 acres within the Los Angeles city limits. The raw land covers canyons and flats from the Pacific Ocean to ritzy Bel-Air, from Sunset Blvd. to the Santa Monica Mts. The partners, who have spent $2,400,000 so far buying bonds on the property, would just as soon have kept mum until everything was sealed tight. But the news tumbled out in a hurry when newspaperman Smith learned *The New Yorker* was about to scoop him in its two-part profile on Zeckendorf. Architects Pereira and Luckman are drawing preliminary site plans. Zeckendorf hopes to build an integrated community, similar to Bel-Air, with homes priced from $15,000 to $40,000.

LIFE: *Steinheimer*


W. L. HUTCHESON

William L. ("Big Bill") Hutcheson, king-emperor of U. S. carpenters, decided 77 years was a ripe enough age to step down. On January 1 he passed on the sceptre to his son **Maurice**, 53. Big Bill has ruled the AFL's United Brotherhood of Carpenters and Joiners since 1915. He has watched its membership grow to 803,000 in 2,800 locals. Only Dan Tobin's Brotherhood of Teamsters is bigger in AFL circles. Son Maurice has long been the union's first vice president, his father's confidant ("If he can't run the brotherhood, I don't know who can"). Maurice's reign is good until the next brotherhood convention in 1954. Meanwhile Big Bill has become president emeritus, will probably take the sun at the brotherhood's lavish national home at Lakeland, Fla., putt around on the golf course named for him.

Frank Lloyd Wright, in a press conference opening his San Francisco branch office,* said he plans to have $5,000 and $6,000 homes available to all comers within a year. FLLW has his mind on a house made of concrete blocks and steel. The buyer will also be the homebuilder, getting his materials through lumberyards. He will do his own stacking in toy-block fashion, run steel rods through designated holes, pour "a few teakettles of grout" over all and move in. Bathroom and kitchen will come packaged. FLLW said prefabrication and absence of union labor will halve present day costs. "Union labor has killed off any legitimate apprentice system—a practice of maintaining a scarce market that they learned from their employers—and kept the cost of labor too high." The owner-built house, sometimes called the "Usonia Automatic," was promised several years ago for initiation at the FLLW-sponsored Usonia co-operative in New York's Westchester Co. Usonia began in the fall of 1948 as a 50-house development. So far 25 are up and three abuilding, all in the $20,000 plus category. So whenever FLLW's blocks are ready, Usonia will be ready to start piling.

Ralph Kaul, who quit last October as chairman of DPA's critical areas committee in despair over the committee's lack of authority to accomplish what it was supposed to, popped up again in a new government housing job. Kaul became an assistant to Neal Hardy, assistant HHFA administrator in charge of plans and programs. Kaul's assignment: to plan temporary defense housing.

Died: **George A. Nichol, Jr.**, 68, former vice president and director of the Johns-Manville Co. and an authority on beach erosion, Dec. 16 in Palm Beach, Fla.; **John Phillips Cosgrove**, 54, of Locust, N. J., executive vice president of the American Radiator & Standard Sanitary Corp., Dec. 13 in New York's Presbyterian Medical Center; **Paul Gerhardt, Sr.**, 88, Cook County, Ill.'s architect from 1909-1912, Dec. 3 in Chicago.

Leonard G. Haeger, NAHB materials expediter, will move up to the combined post of technical and research director Feb. 1 when Carl Lans leaves to join Builder Earl Smith of Berkeley, Calif. **Christian O. Christenson** will resign as FHA property requirements chief to become Haeger's assistant.

Geo. Lohr

VEACH

Named: **John B. Veach**, head of Asheville, N. C., Hardwood Corp. of America, as 1952 president of the National Lumber Manufacturers Association, succeeding Corydon Wagner, of Tacoma. Veach, 52, is head of the OPS's Appalachian hardwood advisory committee and a lumber advisor to the National Security Resources Board; **Ralph E. DeSimone**, 59, a president of Merritt-Chapman & Scott Corp., one of the U. S.'s largest engineering construction firms, succeeding Raymond F. Kopp, who resigned; **James F. Lincoln**, president of Cleveland's Lincoln Electric Co., as president of the National Electrical Manufacturer's Association

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* At 319 Grant Ave., formerly occupied by Taliesin alumnus Fred Langhorst. Aaron Green is architect in residence.

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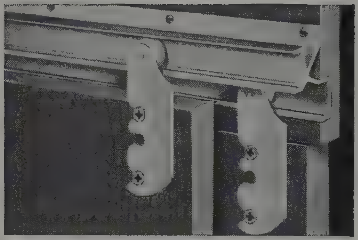
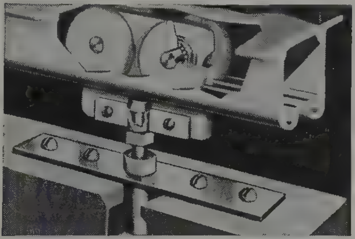
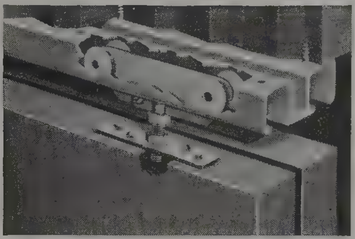
Specially Designed and
Engineered for every
interior application



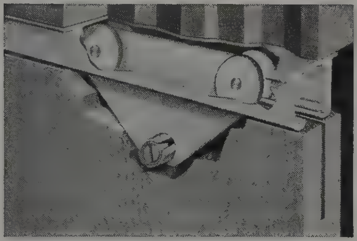
SERIES 250—For by-passing ¾" to 1⅛" doors on cabinets, wardrobes and fixtures. Hanger permits mounting doors flush with cabinet face.



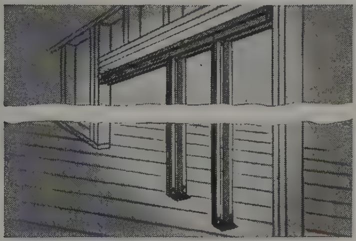
SERIES 400—For heavy closed pocket installations. This is generally considered the finest sliding door hardware obtainable. Allows vertical door adjustment. Ball bearing hangers.



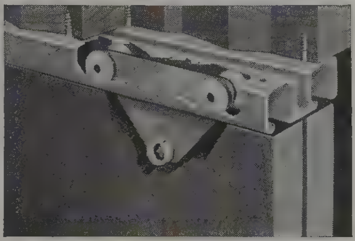
SERIES 600—A new double track designed for 1⅜" by-passing wardrobe and closet doors. Has newly designed adjustable hanger providing convenient means of aligning door to side jamb. Allows ½" vertical adjustment.



SERIES 300—Kennatrack's most popular hanger. Series 300 is for converging doors, closed and open pocket installation. Has exclusive mounting plug feature requiring minimum headroom of only one inch.



SERIES 800—*Metal* Sliding Passage Door *Frame*. Prefabricated. Complete with famous SERIES 400 heavy duty track attached to header at factory. Eliminates all warpage. Easily installed by anyone. Vertical and horizontal ADJUSTMENT features. Wood filler strips permit plaster base, trim and stops to be nailed or screwed to frame.



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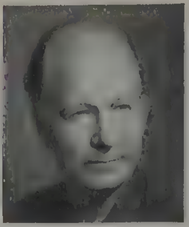
BEHIND THE BLUEPRINTS

Thirty-two-year-old Architect **LANDIS GORES** is a Princeton graduate with honors in classics, and a Harvard-trained architect awarded the A.I.A. medal. From 1945 to 1950 he worked with Philip Johnson, prior to opening his own office in New Canaan, Conn. Gores is a confirmed modernist who claims he is "less afraid of history" than some of his colleagues, turns out an arresting brand of contemporary architecture exemplified by his own house (p. 108).



California Architect **JOHN LLOYD WRIGHT** is the imaginative son of a brilliant father, Frank Lloyd Wright. Born in Oak Park, Ill. in 1892, Wright attended the University of Wisconsin, received extensive private training in structural engineering, painting and sculpture, was chief supervisor for his father from 1913 to 1920. Since 1921, he has practiced independently. Published this month is Wright's playful design treatise on modern ornament (p. 136).

Architect **EDWARD H. FICKETT,** 34, is an authentic third-generation Californian and grandson of a Los Angeles land developer. Educated at the University of Southern California and the Art Center School, Fickett established his own private practice in 1947, does commercial and residential design, with special emphasis on contemporary merchant-built homes (p. 140). Since 1948, he has blueprinted 7,000 builder houses in Southern California.

Thirty-five-year-old Builder **ANDREW S. PLACE** has completed 1,500 houses in ten years of activity in South Bend, Ind. Son and partner of veteran contractor Virgil Place, Andy studied engineering at Purdue, joined his father in 1938. As a result of Andy's intensive transcontinental searches for cost-cutting, time-saving methods of house construction (p. 148), Place & Co. is geared to build 300 houses a year.

DOROTHY SHAHAN of Phoenix, Ariz. is a lady builder, and one of the two women directors of the National Association of Home Builders. Married and the mother of three children, Mrs. Shahan is an astute businesswoman, has run her own dairy ranch and a real estate-insurance business. Last year she carved her ranch into home sites, became a housebuilder, and offered Phoenix its best bargain in low cost housing (p. 158).

JOHN CARDEN CAMPBELL, 37, and **WORLEY K. WONG,** 39, have a busy five-year-old Bay Region design office. Wong is the team's registered architect, trained at the University of California. Campbell is an alumnus of Sacramento College and the Rudolph Schaeffer School of Design. The firm's work (p. 130) reflects keen attention not only to architectural detail, but to color and interior design as well.

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LETTERS

Sirs:

. . . Ludwig Mies van der Rohe has built his first and last cubical to be called a home. . . . Civil Service should grab him for a few pointers in the art of making your doodles pay off. . . .

Any professional man . . . should feel it a direct insult that a leading publication like yours would give six valuable pages of praise to such a ridiculous thing. . . .

Is that the alarm clock, dear, or just the columns warming up?

You say, "The steel frame was welded to such precise dimensions and so tautly that the column flanges seem almost in tension. When you strike them with the palm of your hand, they sing like a tuning fork" and "Since the Fox River occasionally overflows . . . the house may become a glass boat for a few days out of the year."

It all reminds me of that song:

> When the sun goes down and
> The tide goes out
> All the columns gather round and
> They begin to shout—Boiang! Boiang! Boiang!

There is so much wrong, left out, completely ignored, never considered that time does not allow me to enumerate. I'm ashamed of you.

WILL D. SAMPSON
Consulting Mechanical Engineer
San Antonio, Texas

THE RAVING

Once upon a midnight dreary, as I pondered weak and weary
On *Forum's* quaint and ad-filled volume of sibyllic lore;
Suddenly there came a passage—passage pregnant with a message,
(Pregnancy of doubtful presage)—I had never read before:
Quoth der Rohe, "Less is more."

Back then to the passage turning, all my soul within me yearning,
To this esoteric offering from the editorial store,
"Gosh," said I, "this murky thesis must be something even Mies is
Going to clear up piece by piece. Is nothing sacred anymore?"
An echo murmured, "Less is more."

I mind less this arty riddle than the rest, the arty twiddle.
Both serve to raise a doubt where admiration dwelt before.

(Continued on page 84)

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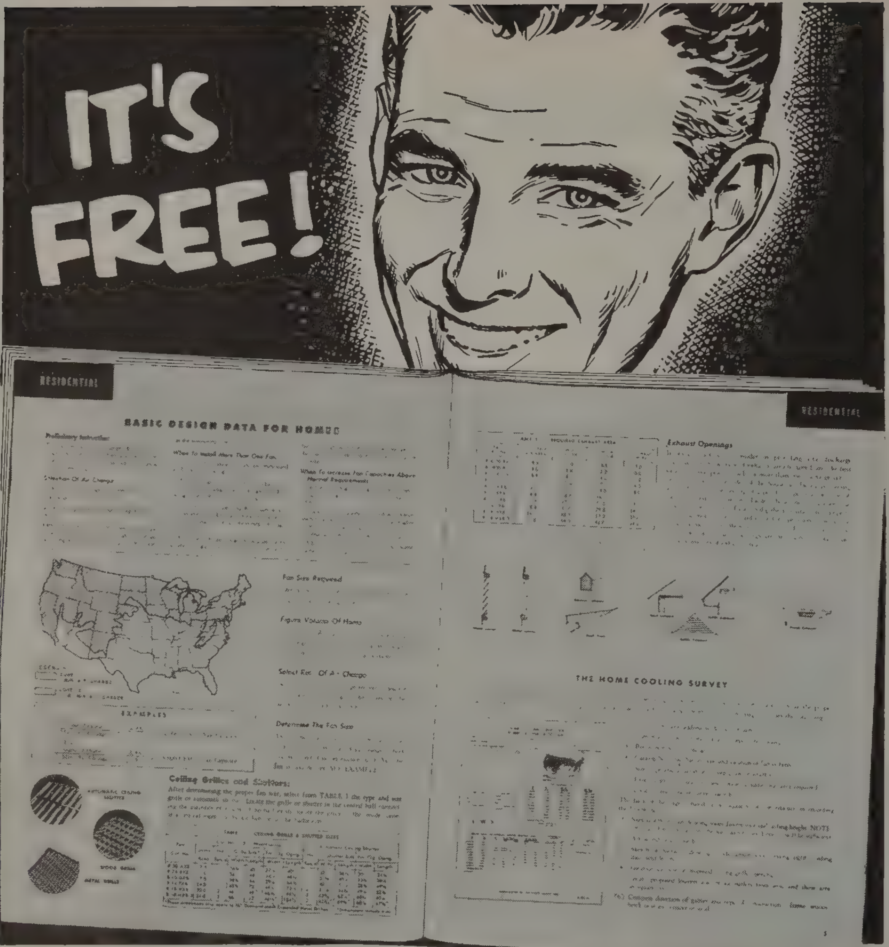

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LETTERS

Doesn't it embarrass Mies—make his modest
 cheek cerise—
All this groveling at his füsse? Rise, O scribe
 from Farnsworth's floor!
And let's have less of "Less is more!"

With the customary apologies to Poe,

WALKER O. CAIN
McKim, Mead & White, Architect
New York, N. Y.

Sirs:

Your thoughtful lucid and, in every sense adult coverage of Mies van der Rohe's Farnsworth House (was) laudable for its serene concentration on the higher concerns of architectural criticism—a devotion only too rare in the pages of most publications. . . . It gives hope of a resurgence in periodical writing of wha one had feared to be, at the very least, a forbidden art . . .

However, several broad questions suggest themselves: Are those who do not conform to the precepts of Mies van der Rohe by their waywardness excluded? Has he, really, this monopoly of virtue? Are the deviations of . . humanism necessarily without integrity and impure . . .?

But your closing note, your final tribute to a major figure, is above the captious or the caviling. Indeed, "the subtle influence is likely to remain—the influence of a great artist, of a great work of art," and (most basic) "of a great discipline"—the surest value Mies has to transmit.

Yet, the final paradox is overwrought: It cannot be here, and surely not here alone, tha "man in architecture shall be free."

LANDIS GORES, *Architec*
New Canaan, Conn.

LONELY MOUSE

Sirs:

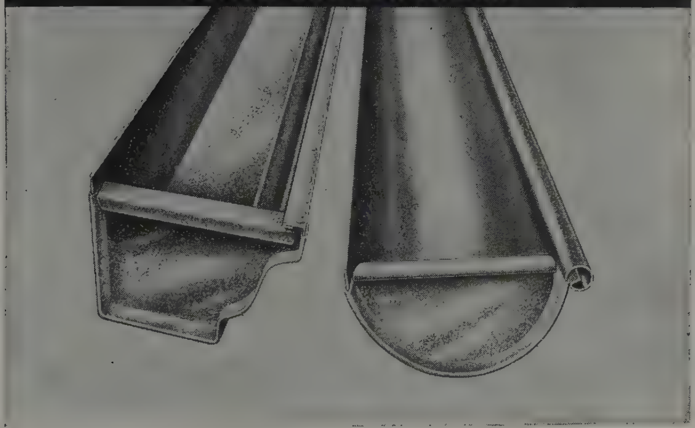
We here in California, land of the so-calle paradise for con men, sharpies, bookies, et al sincerely hope that Dr. Farnsworth gets Mies van der Rohe—but good! If I can add—Mies fee for that guest cottage was $27,000, which i roughly 35% of the exorbitant cost of $74,000 Dr. Farnsworth could have had the master o them all—Frank Lloyd Wright—for the usua 10% or 12% which would have included a architectural superintendent on the job all the time, besides Mr. Wright's own supervision. I'v forgotten how long it took the mountain to "labor and bring forth a mouse"—but I'll be it wasn't five years. The whole thing has the architectural schools enraged and sick—but i accord: that not only was the house a mouse—but a hairless, worked over, lonely mouse. . . .

There ought to be a Hippocratic oath fo architects—as the layman knows as little abou architecture as the layman knows about medicine.

ELIZABETH LAUTNE
Hollywood, Calif.

(Continued on page 88)

REYNOLDS *Lifetime* ALUMINUM
GUTTERS AND DOWNSPOUTS



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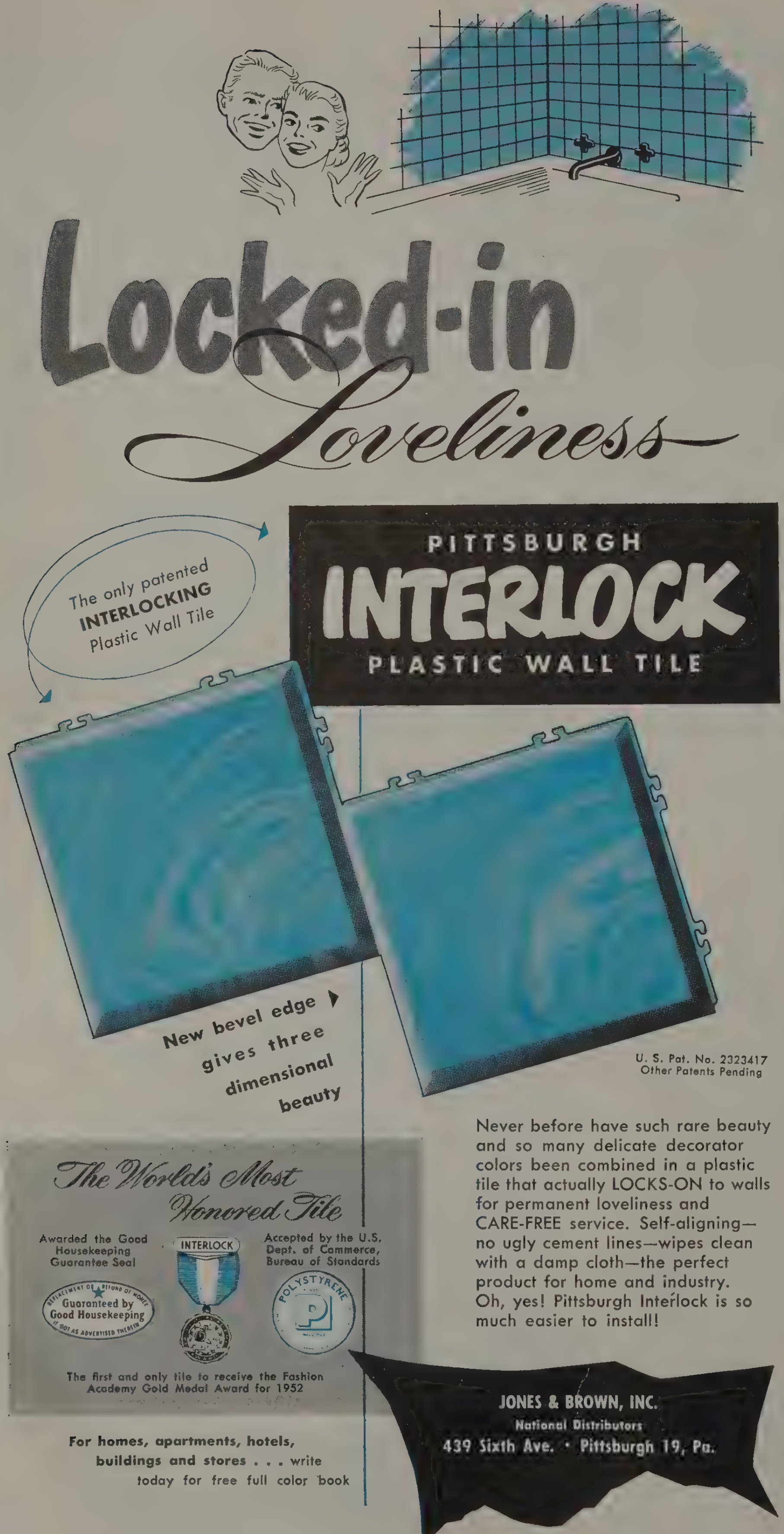
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Richard Churchill, *Landscape Architec*
Atlanta, Ga.

FOR ECONOMY, CHARM

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John Rex, *President*
California Council of Architect
Los Angeles, Calif.

Sirs:

Your move to provide more specialized coverage in both commercial and domestic fields o building is gratifying and will maintain you leadership in the publishing business.

Robert G. Axe
Philadelphia, Pa.

Sirs:

. . . congratulations upon this move; it wil be a very valuable magazine for the industry

N. R. Kaplan
Barton, Inc.
Brooklyn, N. Y

Sirs:

The building industry will probably be much better off if such a magazine is not published

R. M. Janin
Roy M. Janin Lumber C
Portland, Ore.

Sirs:

In my opinion you have pulled a boner. . . I am quite disappointed..

David Jacobson, Jr
Glendale, Calif.

Cornerstone for a New Magazine

This is Volume 1, Number 1 *of a new venture in journalism, a magazine whose clear and single purpose is to help Americans find a better way of living by giving them better homes at prices they can pay.*

This magazine is conceived, written, and edited for professionals—for those whose calling and life work it is to design, finance, build, or supply materials for houses. Let there be no confusion here. If others find it useful to read over the professional's shoulder they are welcome, but this is no primer for laymen.

Even professionals must reach at times to grasp the new developments we shall report outside their special fields—for this magazine must help architects find a new understanding of the builder's role, help builders learn a new understanding of design, help every professional to a new feeling for housing economics and finance, help architects, builders, and suppliers alike to a new concept of industrialized construction based on presizing a great variety of parts to standard dimensions for production-line assembly.

We hope to make this magazine practical and immediately useful. We will use all our journalistic resources to find and let you see in fine photographs, plans and scale drawings the new homes it is important for you to know—homes with fresh design, fresh constructions, fresh ideas—single-family homes and homes in small apartments—new houses and old houses made new with new ideas—custom-built houses which may perhaps be ten years ahead of our time and volume-built houses in which good new ideas are put within the reach of every man. We will reinforce these case studies with special articles on significant new trends and new departures—new materials, new constructions, new opportunities.

But beyond all these reportorial undertakings we recognize a deeper responsibility—for those who profess to serve building as journalists must share in full measure building's responsibility to the American people.

HOUSE & HOME takes its name from the belief that our industry owes the American family far more than shelter. If the good life is to be the heritage of every American we must build into our houses, from early design to closing finance, all the satisfactions that make a house a home. We must build in more space, more convenience in living, more enjoyment of the land, more security of tenure, more neighborhood advantages. We must so use design as to make the home whole and add pleasure to utility. These are the deep-seated, age-old, never-satisfied desires that make families want houses of their own.

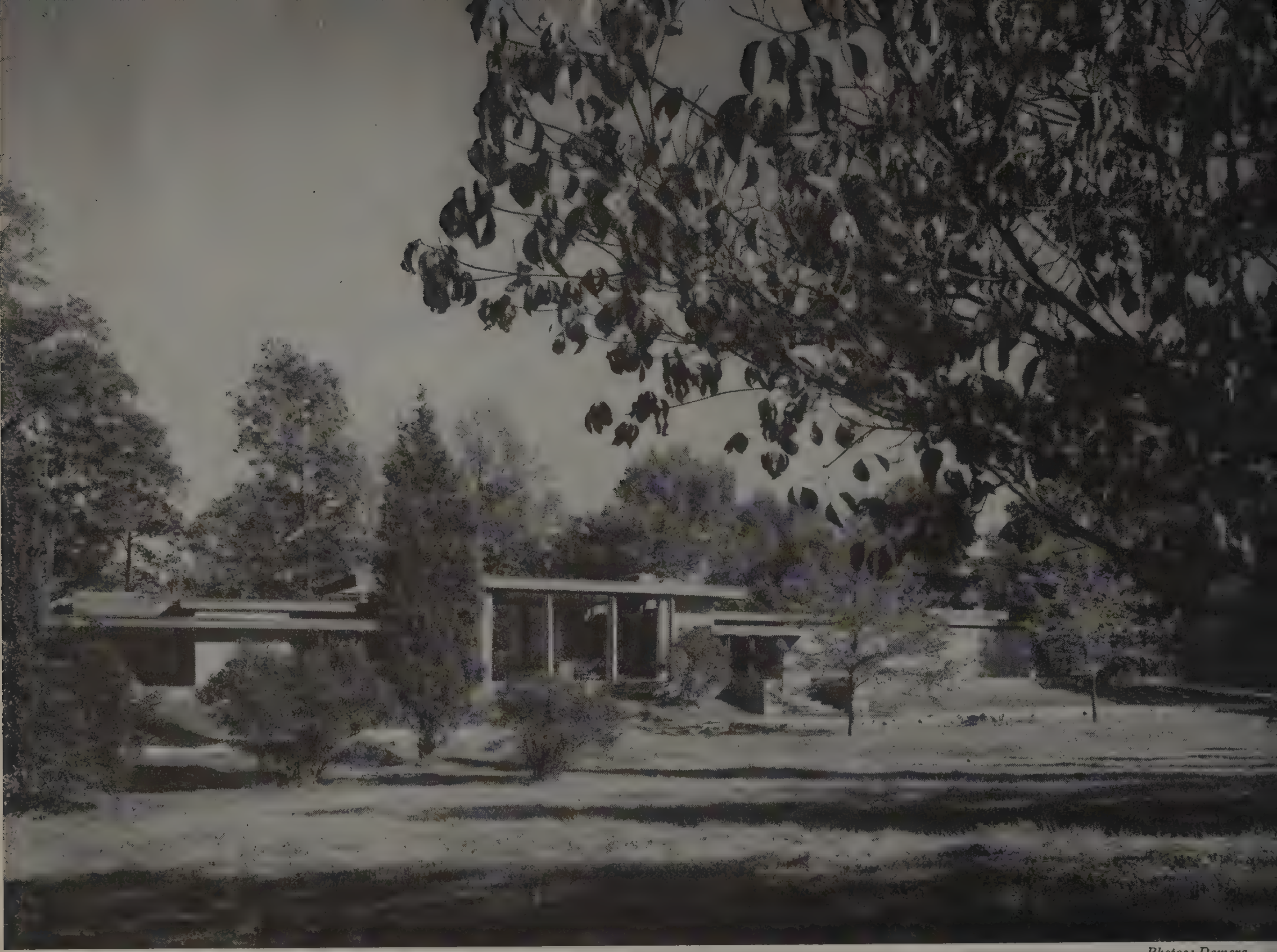
Only professionals can make such homes attainable. Only professionals can combine design, materials, methods and finance to change the hard arithmetic of shelter and create for every man a home for the good life.

You have great assets with which to work. You have all the resources of architecture, and they have never been greater. You have better, more varied, more specialized materials. You have liberal financing never before possible, and far more know-how than the master builders of the past. You are heirs to the wealth of new technology pouring from the laboratory. Above all, your industry stands at long last on the threshold of its industrial revolution—the industrial revolution to which, in other fields, we owe every advance in living standards since colonial times.

Given these assets, given the vision to see your goal and the faith to continue your endeavor, we believe you will succeed faster than even you would dare to think.

In the remaining pages of this issue and in all the issues to come, HOUSE & HOME *purposes to serve those who live in America's homes by giving you who must create those homes a magazine worthy of your opportunity and your responsibility.*

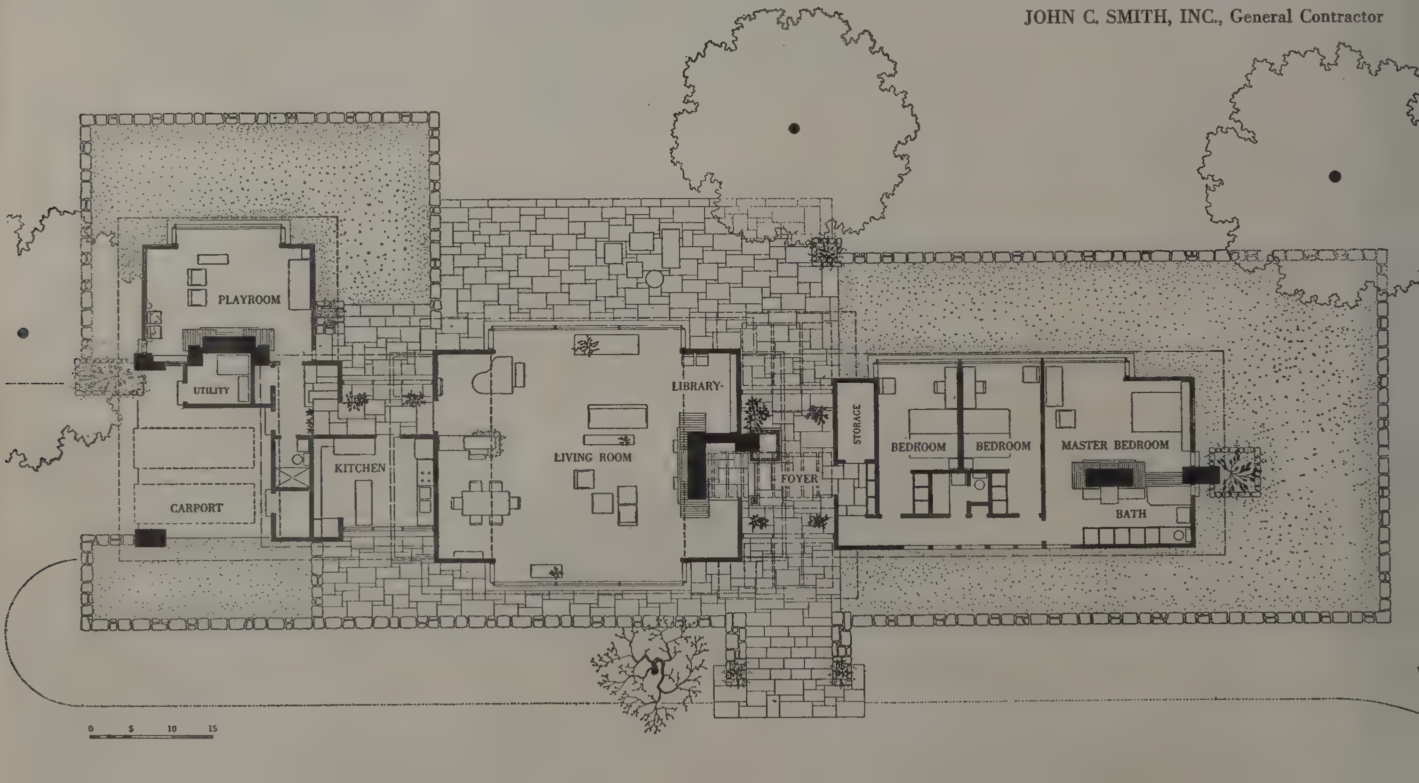
—The Editors



Photos: Damora

View from the road shows 130′ long facade

LOCATION: New Canaan, Conn.
LANDIS GORES, Architect
JOHN C. SMITH, INC., General Contractor



A TRADITIONAL HOUSE IN THE MODERN IDIOM

Some say this is a traditional house executed in the modern manner. Others that it is a contemporary house permeated with tradition. New Canaan conservatives, still baffled by such avant-garde work as the Marcel Breuer, Philip Johnson and John Johansen houses, use a more colloquial phrase. They call it "a modern house that really looks like a house."

It is modern because its plan is open and its spaces dynamic and bold; because its details are clean and simple; because it is intimately related to the landscape surrounding it; and because its many flat roofs and its large sheets of glass are of the technology of our time.

It is traditional because it was consciously designed in the living tradition of American domestic architecture, picking up this tradition at about the point of Frank Lloyd Wright's 1912 Coonley Playhouse; because its composition is almost symmetrical, both in the whole and in many of its parts; because its scale is monumental and its composition is three-dimensional; and because it is a deliberate attempt to emphasize the permanence of "home" rather than the temporariness of "industrialized shelter."

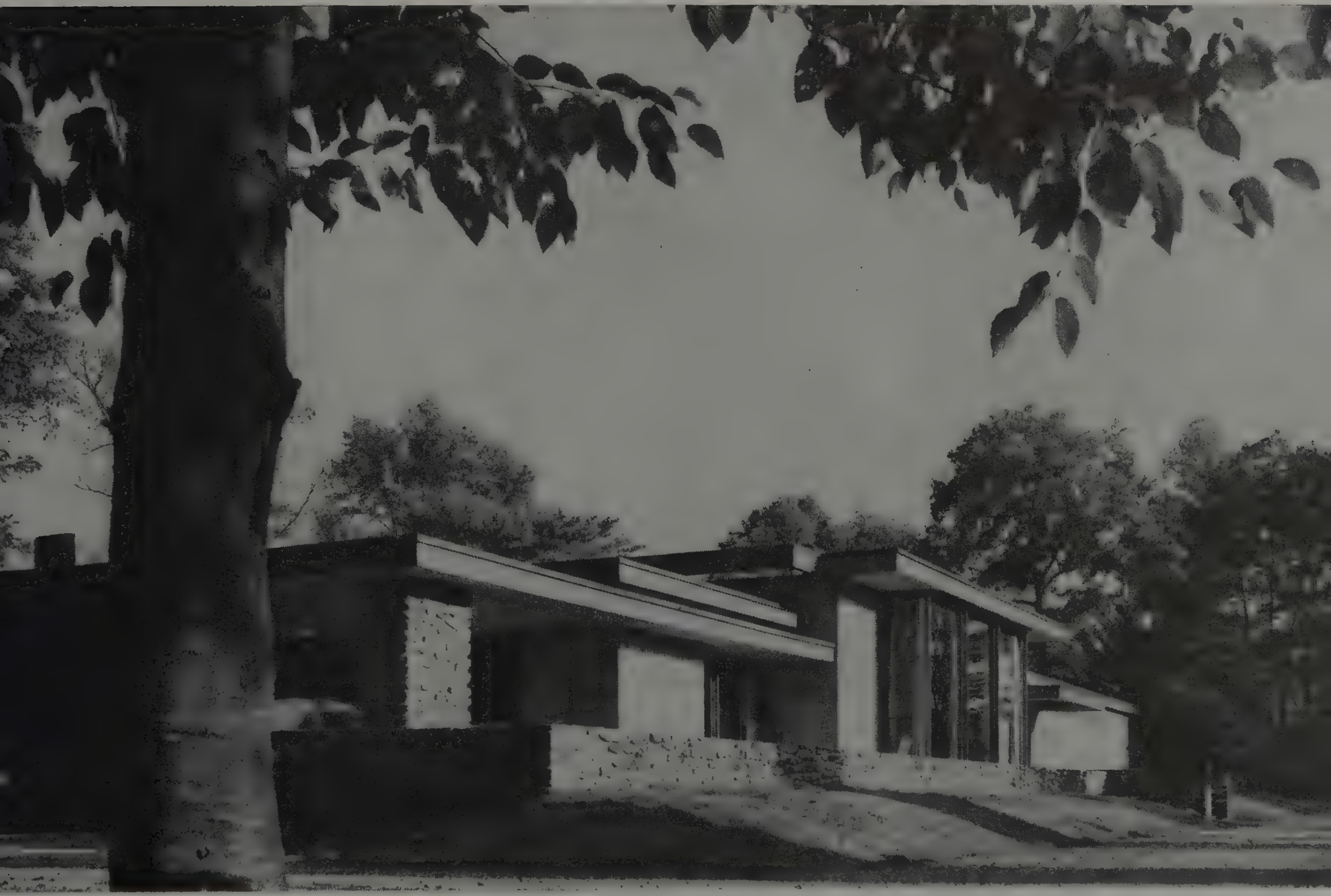
The house is the first major job by a young architect who steeped himself in the classics at Princeton before going on to Harvard to study architecture under Gropius and Breuer. In designing this house for himself, Landis Gores drew upon both classical discipline and modern, technological freedom for inspiration.

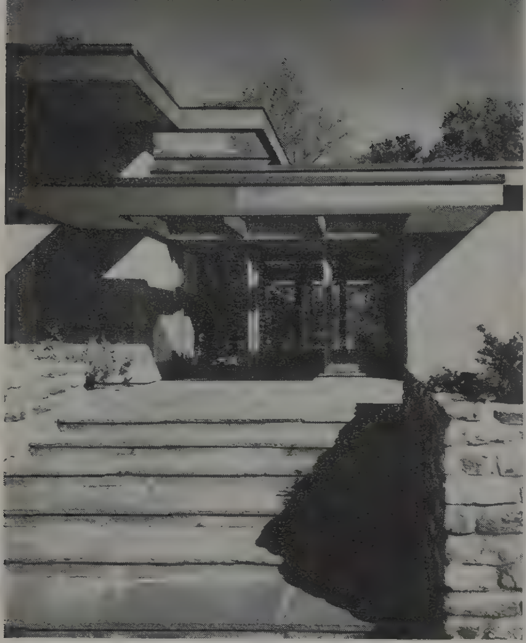
Some critics will dismiss the house as a compromise. Others may consider it a harbinger of how such diverse influences as Gropius and Breuer and Mies van der Rohe and Frank Lloyd Wright may eventually be reconciled in the main stream of architecture's advance.

In-line plan

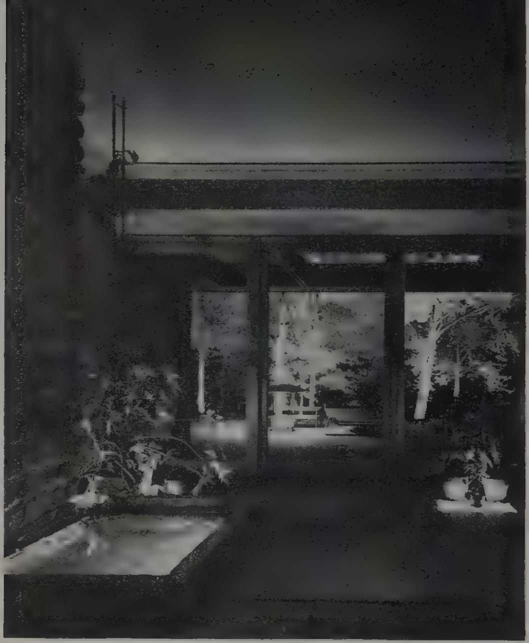
Near-symmetry is this building's most traditional touch. Strongly influenced by Wright's near-symmetrical Prairie Houses, Gores went to great lengths to make his tall (11′ high) living room the center of the composition and let the low-slung roof planes over the extended wings on either side pyramid up to the climax of this living room.

Carport is in foreground, tall living room in the center with entrance canopy beyond. Exterior is of vertical cypress siding stained gray. All facias and trim were treated with dark linseed oil finish.

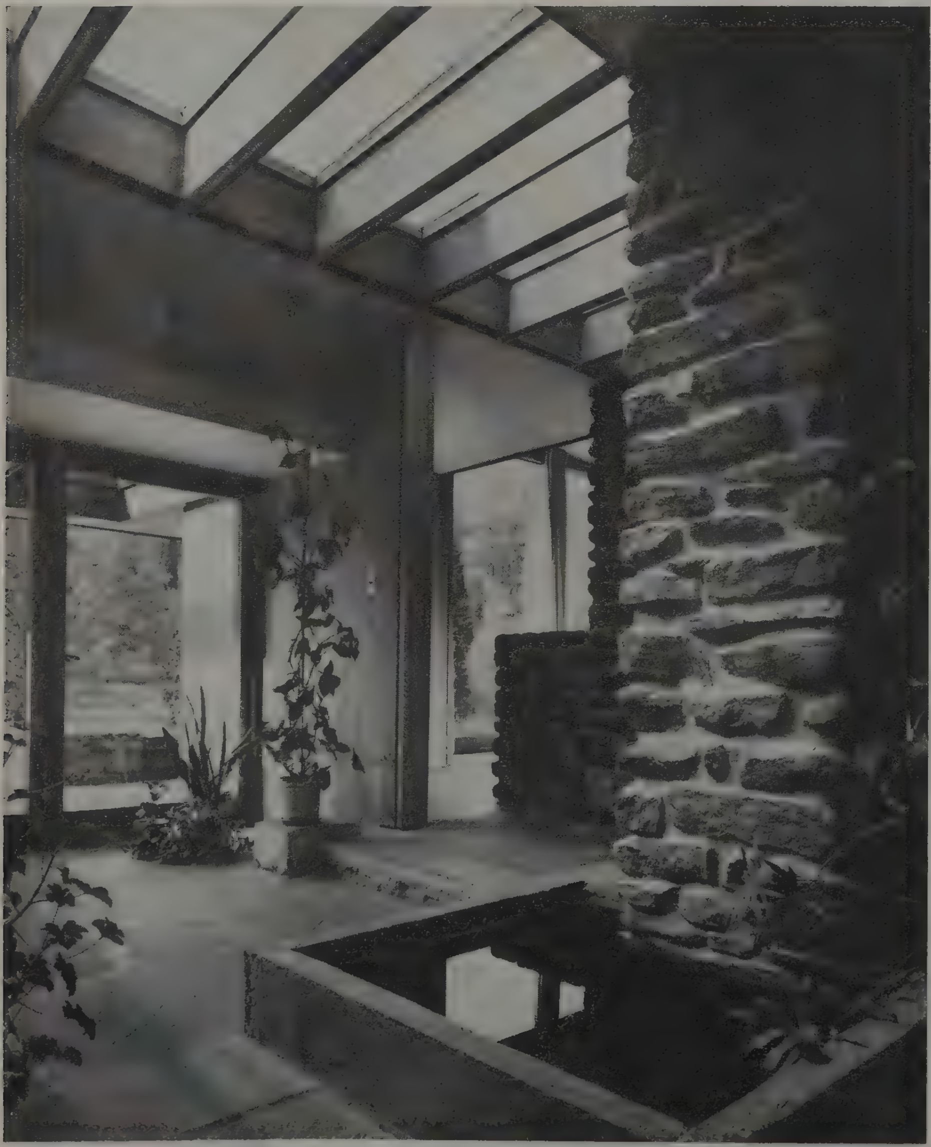




Main entrance is under low (6'8") canopy



Night view of entrance foyer shows illuminated goldfish pool, plate glass covered floor lights. Gores placed plants on top of these, illuminated the undersides of leaves and branches. Same principle was used in exterior lighting of woods.



Entrance foyer with goldfish pool and skylight trellis. Living room is beyond stone mass at right.

The price paid for this monumental effect is that the living room becomes a busy traffic center, lying between the kitchen and front door, between the sleeping quarters and the children's playroom. Gores recognized this problem but found it insoluble in his site without sacrificing either the monumental symmetry or the dramatic impact of the 130′ long front, or the excitement of glass walls and a view on both sides of the living room.

The plan, in fact, is well suited to the site, for the house is located on a long, narrow and rocky spine that runs north-south. To its east there is a steep drop—a wooded valley and a view of hills beyond. To the south is the bed of a small stream. And to the west, between the rocky spine and the road, there is a shallow and occasionally marshy depression. To keep his house on the dry rock, Gores developed his 130′ long, in-line plan, let his house ride the ridge.

To the south of the living room is a magnificent entrance and, beyond it, a string of bedrooms. To the north are the kitchen, carport and a spacious children's playroom. All along the east side, overlooking the valley, are broad terraces retained by almost medieval stone ramparts, some of them 9′ high.

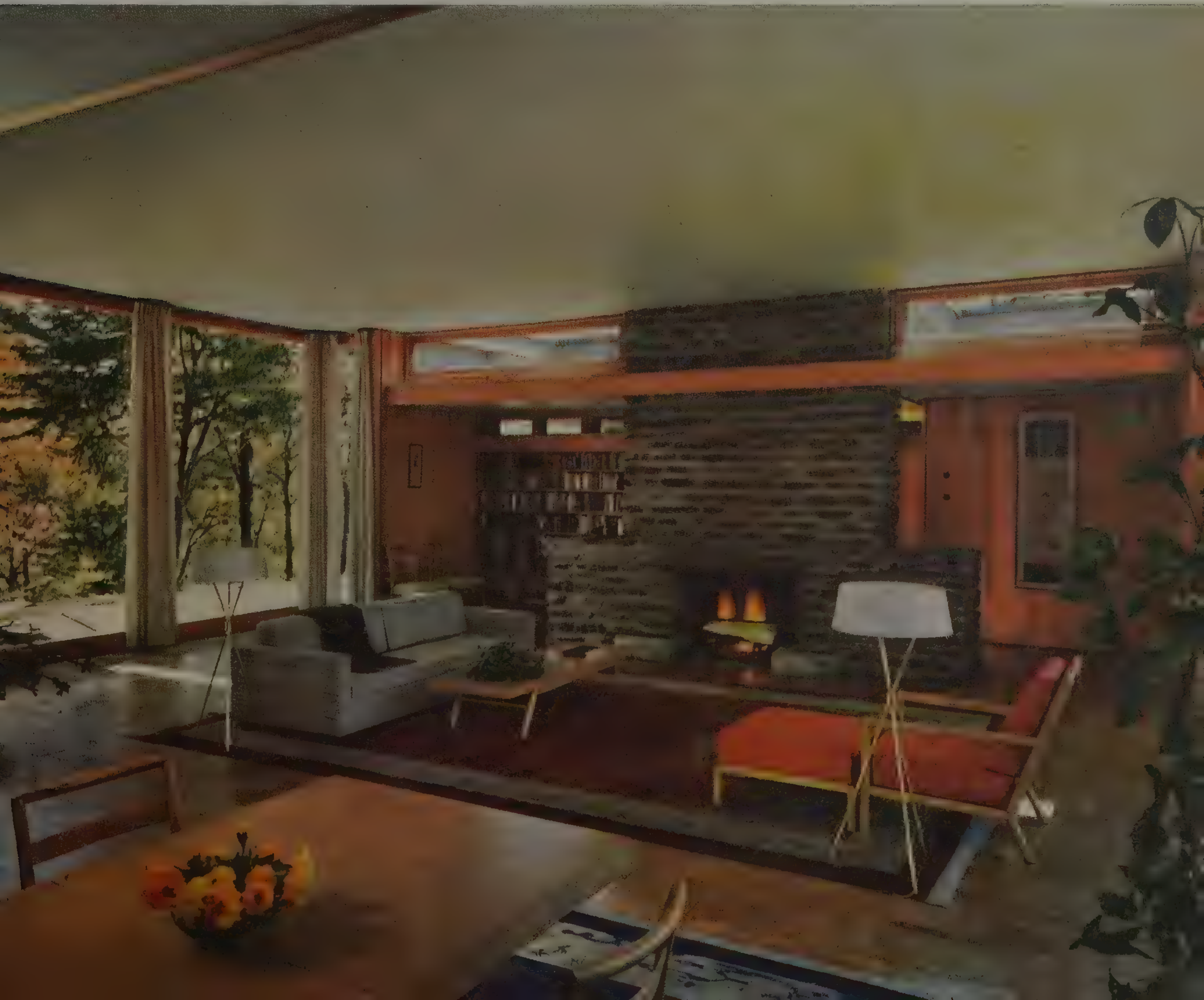
The separation of parents' and children's quarters that results from the central location of the living room gives each a high degree of privacy; it also creates (for future use) a separate apartment for the children at the north end of the house, complete with its own entrance, large fireplace, and with direct access to the kitchen. This plan-division is probably the only "Breuer touch" in the house.

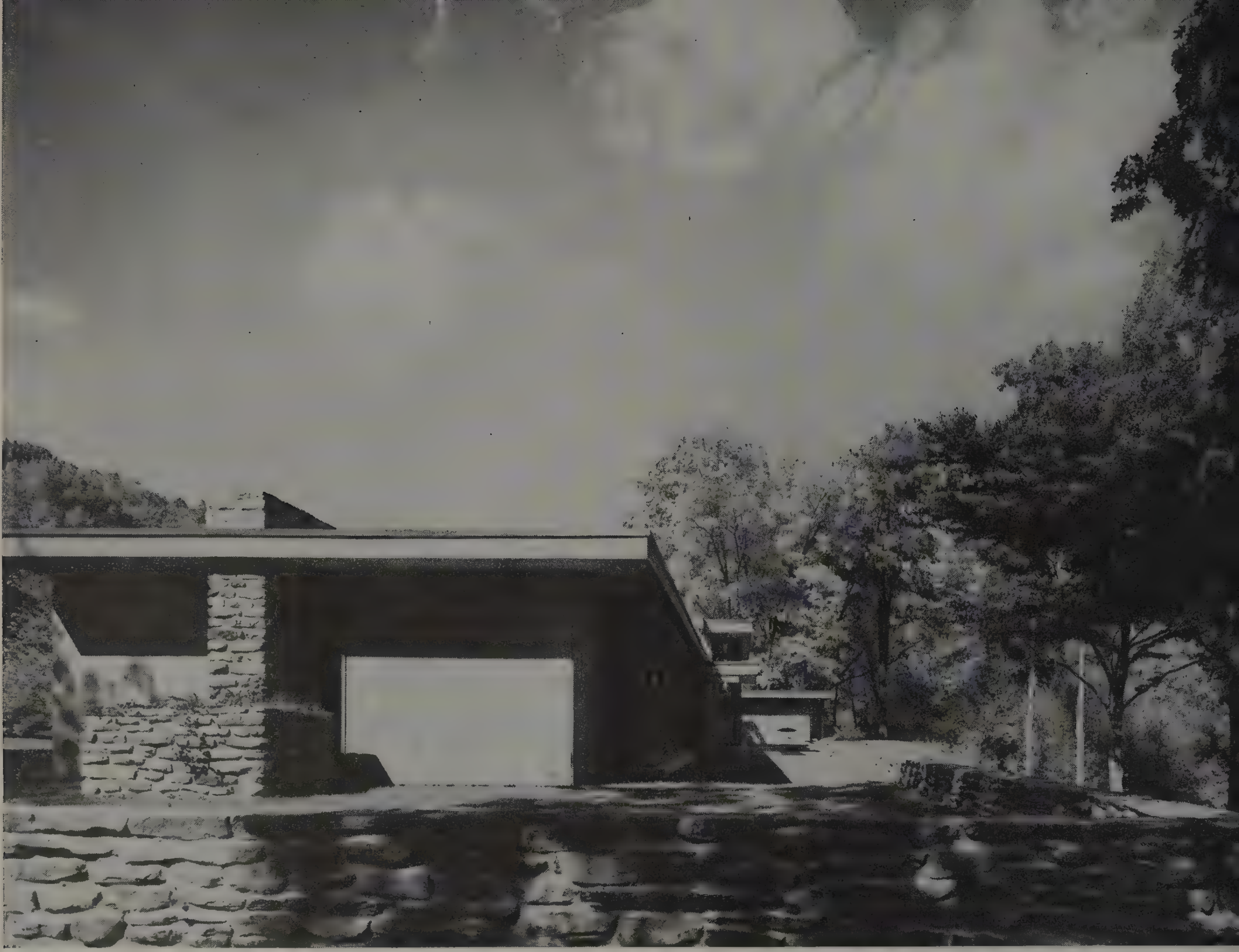
Plastic space

To the right of the living room, as you approach the house, is the very formal entrance; under its low (6′8″) canopy (which looks very much like the roof over Wright's Coonley Playhouse) you walk through a wide glass door in a glass wall into a tall and lavish foyer running clear through the house. Directly ahead, and visible through another wall of glass, are the terrace and the trees; above is an exciting play of light and shade through clerestories and through trellises. Sunk into the flagstone-paved floor are a goldfish pool and a series of lights covered with sheets of ½″ thick, rough plate glass.

To the left is the heavy stonework that conceals the living room. As you walk up one step and around this mass you suddenly face the 32′ x 37′ living room—two of its sides all glass, the other two sides lit through clerestories just under the 11′ high ceiling plane. This elaborate build-up toward a climactic effect is again in the best Wright tradition—as are the changes in ceiling height, the changes in floor level, the long clerestory strips just under the ceiling.

Living room has one of three massive fireplaces in the house. Chimney breast is 13′ wide, embraces furniture group





View of east side of house shows high stone ramparts: retaining walls for terraces

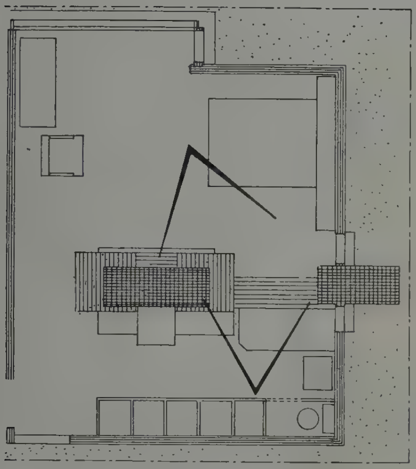
The mass of stone now reveals a huge fireplace on its living room side. The breast is 13′ wide—a monumental base, wide enough to receive a spaciously arranged furniture group around the fire. "If I had made the chimney breast any narrower," says Gores, "the couch and the chairs would have seemed to slide past the fireplace."

Precise detail

But while the lighting, the change of ceiling and floor levels and the continuity of space through a series of twists and turns are in the Wright tradition, the detailing is very much in the manner of Mies van der Rohe. (Until recently, Gores was associated with Mies-disciple Philip Johnson, with whom he worked on Johnson's famed Glass House. Gores, characteristically, is a perfectionist draftsman.) In the living room, the mullion details with their cabinetwork precision are most clearly Miesian in feeling. Elsewhere in the house, Gores has framed each plaster wall panel with neat metal plaster-stops, has left a recessed ¾″ cypress strip, ½″ deep, between all plaster panels and floors, ceilings and door frames. The door frames, too, are outlined with unusual precision: a narrow, projecting strip of wood forms jambs and head.

Although Gores deliberately stayed away from a consistent structural rhythm—he feels that this would have become a strait jacket—his consistent use of these precise details around doors, plaster panels and window openings gives the architecture a coherence that is astonishing in such a complex house. For complex it is; Gores realized the dangers inherent in a 130′ long, evenly modulated facade, decided to break it up with projecting and receding roof planes, with projecting bay windows (whose narrow sides are full-height glass doors, screened and used for ventilation) and with wrap-around retaining walls. As a result, the house is full of variety and surprises, appears in retrospect (because of its many vistas) almost twice its actual size.

Economy was not the watchword in the design of this $53,500 (excl. of fees and landscaping), 3,250 sq. ft. residence, but Gores did occasionally discover inexpensive solutions to his luxurious details. His door openings, for example, go all the way up to the ceiling to avoid looking like punched-out holes in the plaster partitions. The doors are 8′ high, were specially made up for him out of 8′ plywood sheets at a cost of only about $22 per door—very reasonable indeed considering that he thus avoided the framing and plastering needed above standard doors. The 8′ door height, plus 2¼″ for the head, gave him an 8′ 2¾″ ceiling height throughout his bedroom wings.



Master bedroom has open bath directly behind low stone shelf

View from open bathroom toward sleeping area with terrace beyond

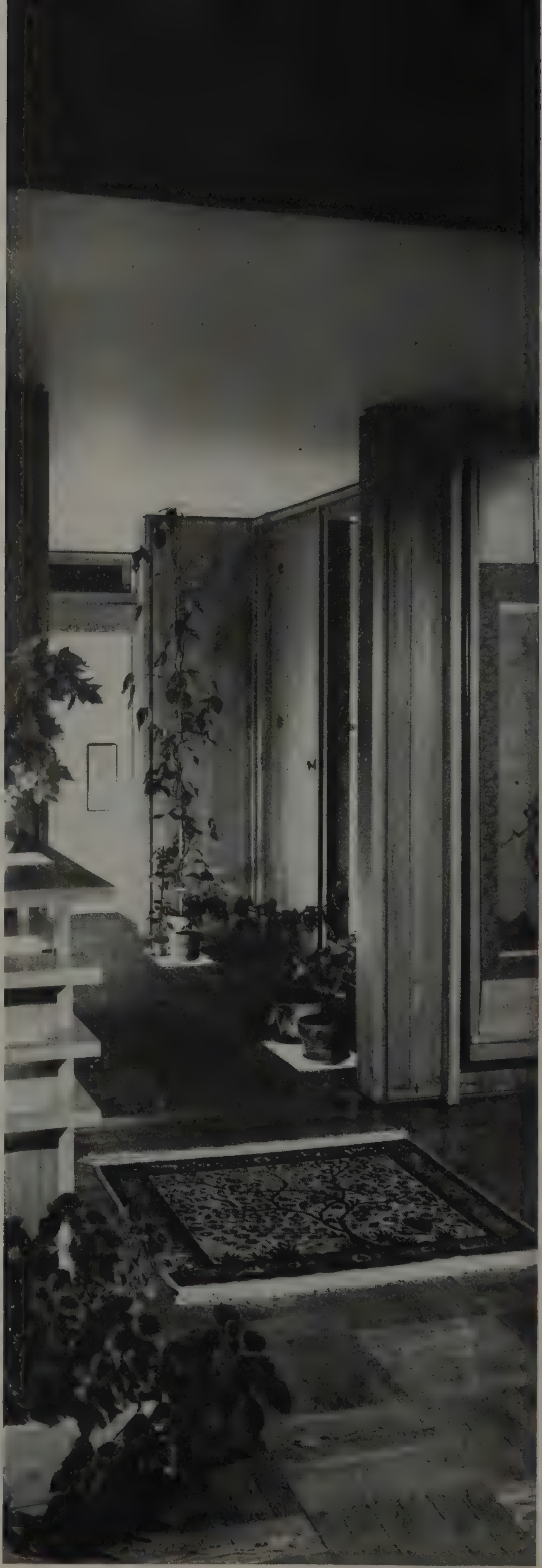
A clear saving resulted from his laying out the flagstone patterns for his paved floors. By planning to use only standard bluestone sizes—multiples of 6″ in each direction—Gores enabled his contractor to order the stones in exact sizes and quantities, avoided waste due to cutting on the job, and speeded up the masons' job immeasurably. The saving was more than 25% of the original bid.

Monumental scale

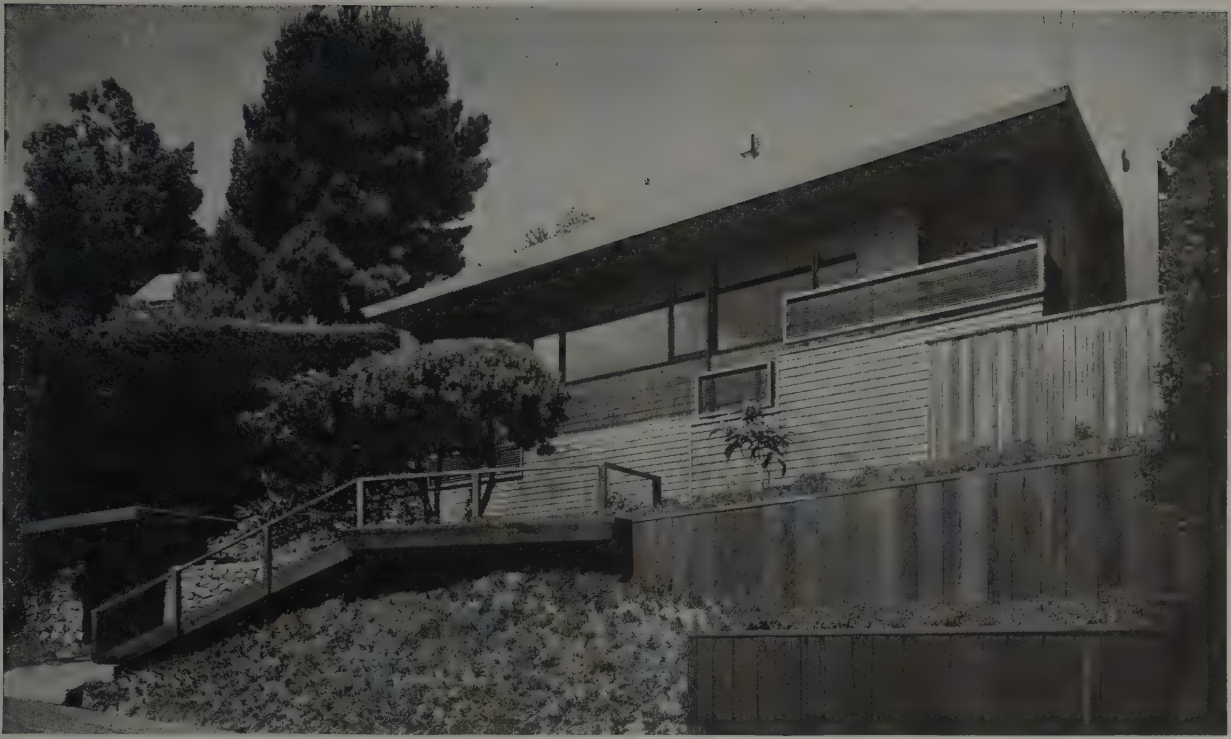
Not only the tall living room, the entrance lobby and the stone ramparts on the valley side of the house proclaim its almost aristocratic scale; there is an almost aristocratic grace about the way of life which the house implies. Landis Gores is a creative young conservative among his avant-garde contemporaries. There are many like him in modern American literature, poetry and philosophy, but in architecture his work is still an isolated phenomenon.

Because Gores thinks that good architecture does not depend upon good functioning alone, the house deliberately sacrifices certain practical conveniences in order to achieve certain architectural effects. It is, for example, most impressive to drive past the entire 130′ entrance facade to get to the carport; but this robs the glazed living room of some privacy from delivery trucks and unexpected visitors. It is equally impressive to pass through the house in a series of winding passages and up and down a series of steps; but the men who do the time-space studies would probably consider this inefficient.

Yet Landis Gores has many beautiful details to compensate for the functional insufficiencies. A spectacular example is the master bedroom—an 18′ x 23′ living space with still another stone fireplace and *with a bathtub as part of the setting!* The scale is aristocratic, the style Pompeian. In an age regretfully committed to minimum cubage and the lowest common denominator, a house like this one—in the grand manner—is a powerful shot in the arm, a thing to lift your spirit.



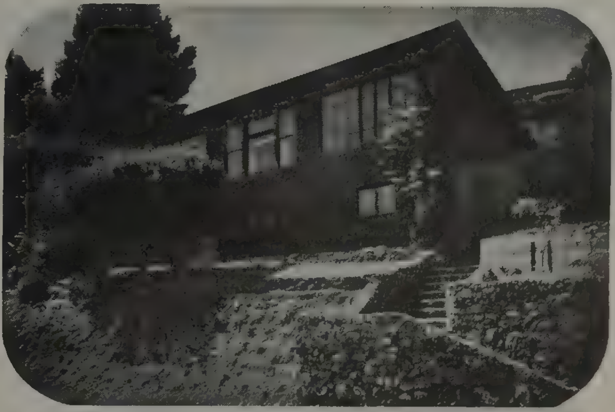
Night view from living room into kitchen-playroom wing shows recessed floor lights used again.



Handsome street side has new steps, handrails and planting to unite house and site in horizontal planes

Photos: Roger Sturtevant

REMODELED 1910 COTTAGE OVERLOOKS SAN FRANCISCO BAY



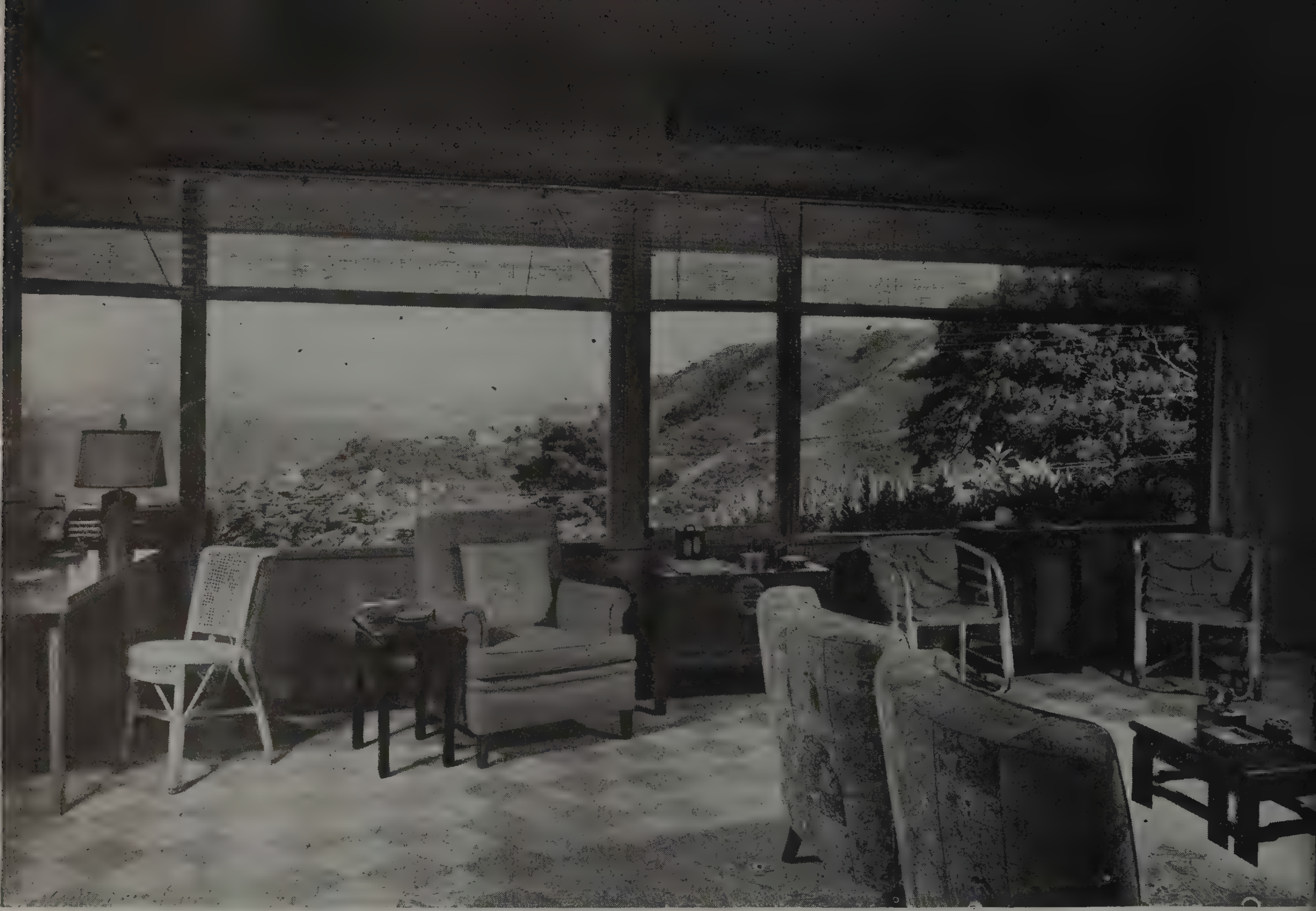
Old cottage had cut up windows, no roof overhang, vertical lines, devious steps coming from street at wrong side of lot. There was no relationship between house and site.

"A good house always offers a good solution to living problems—whether you are starting from scratch or remodeling. In this case we had to start with a conventional cottage, vintage 1910, perfectly well suited to the owners of that day but entirely unsuited to the present owners and their way of life. . . . I think we have proved that it is possible to open up an old house to today's ideas of space, view, convenience—without destroying the feeling of the original."

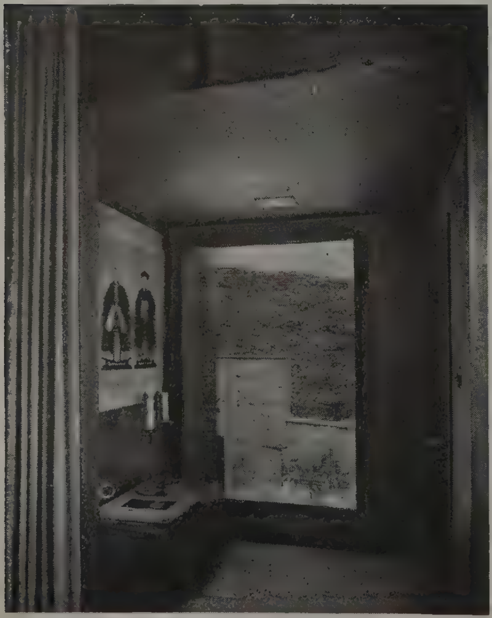
That's how designer John Campbell sums up this very handsome job; more detailed study shows that perhaps he was minimizing both the problems and the results of a remodeling which also required skillful relandscaping to unite garage, house and entry on a steep and hilly site.

What the present owners really wanted was the view. The cottage itself was typical of its era: a floor plan bound to make today's way of living difficult, no indoor-outdoor integration, no means of getting from garage to house except by walking along the street and on up a devious flight of steps on the far side of the lot. It had small rooms. It was boxy. It was cut up.

LOCATION: Marin County, Calif.
CAMPBELL & WONG, Architects
ECKBO, ROYSTON & WILLIAMS, Landscape Architects
RALPH MURPHY & SONS, Builders



Big, expansive new living room combines space of former living room, den and entry porch. It is opened up to a panoramic view of San Francisco and the Bay; 5′ roof overhang, its soffit painted green, cuts glare. Below, entrance foyer looking toward new fence and old cypress hedge.

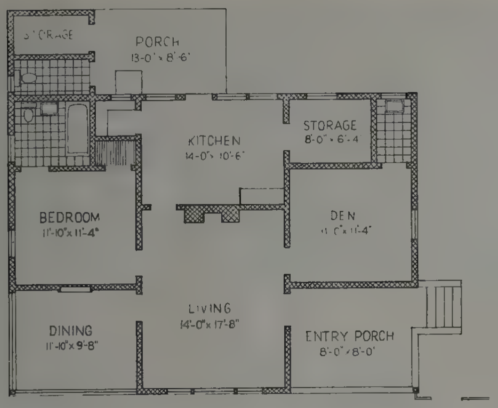


Now the floor plan is flexible and modern. It provides a big, dramatic living-dining room across the front, open to both kitchen and outdoor dining terrace, and exactly right for a woman who cooks convivially and who entertains casually and frequently—as many as 150 for tea! The old bedroom and dining room porch (which was a good 20-foot walk through the living room from the kitchen) have been combined into a 12′ 4″ x 19′ 8″ master bed-sitting room with a view of the bay. The old kitchen became the present study-guest room, with an extra bath added; the old side storage room was converted into a compact, efficiently equipped kitchen; part of the back porch was enclosed and turned into a laundry.

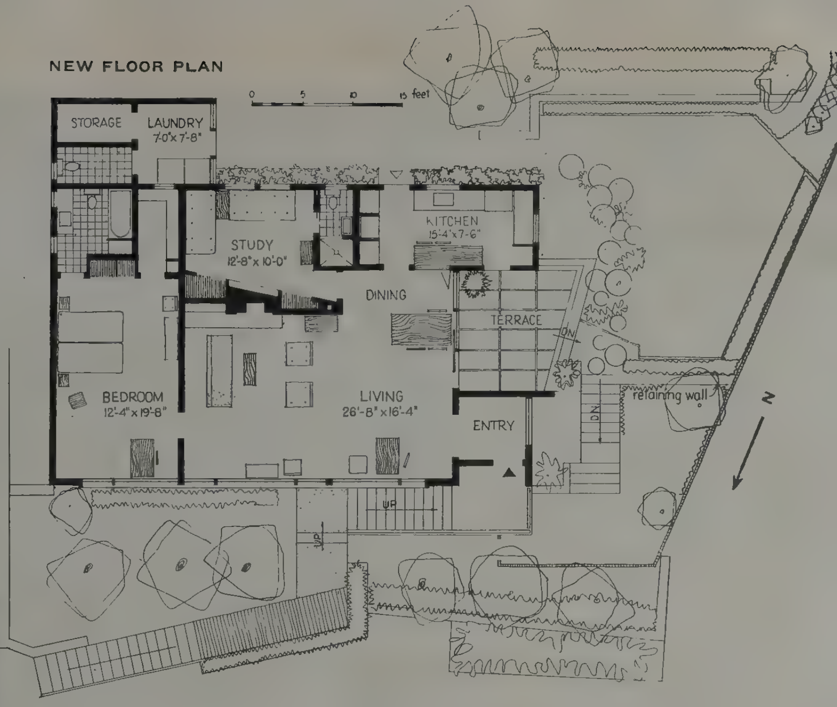
In redesigning the living room, the architects worked around the existing fireplace and installed bookshelves where there had been a door to the old kitchen, thus achieving a quiet sociable area free of traffic. The fireplace wall and the one adjacent to it they paneled in redwood (some from the original house); the other two became window walls. On the terrace side, windows are floor-to-ceiling; the 33′ expanse of windows across the front start at sill height, to assure privacy from the street below. An example of careful attention to detail is the cove lighting above front windows, so the night view of San Francisco may be enjoyed without seeing the reflection of lamps on the window glass.

(Continued on page 118)

OLD FLOOR PLAN

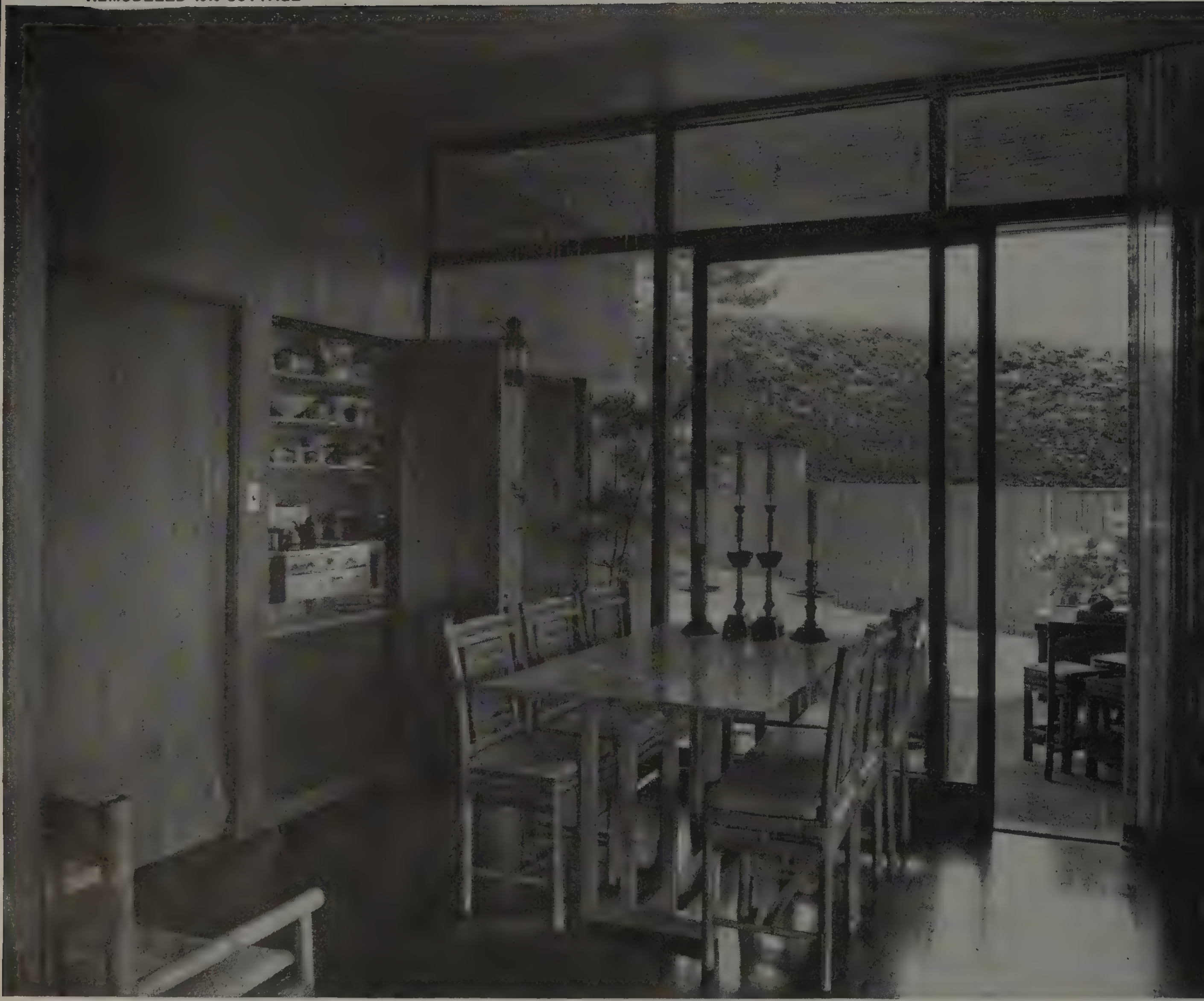


NEW FLOOR PLAN



New floor plan unites living, dining, kitchen and terrace areas for a couple who like to entertain. Landscaping makes full use of hilly site; garden is on sunny side, off terrace.

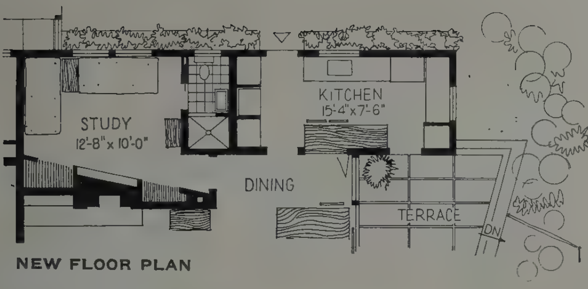
New living room, below, with original high (10'6") ceiling makes a fitting background for modern and old Chinese furniture, water colors, art objects. Old door to kitchen, photo left, was filled with bookshelves, walls paneled in redwood.



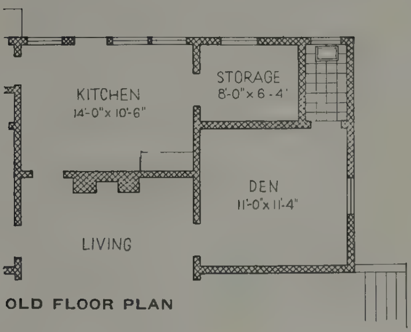
New dining area, above, opens to both terrace and kitchen, made to order for a woman who cooks convivially, gives large parties. The old dining porch, below, was completely isolated from both kitchen and garden.

Structurally, the main problem was not the removal of exterior walls (*see plans*), but finding a new support for ceiling joists where interior walls and beams were removed in the course of enlarging the living room. The architects ended by using trusses. They even ran a long (27′) truss across the new living area about 12′ from its south wall and in line with the spur dividing entry from terrace. The truss was as deep as could be squeezed in under the rafters of the hip roof.

The handsome exterior retains its original character, has the same cedar shingle walls; what changes there are came about as a natural outgrowth of the interior planning. In the front, the sweeping window wall is protected from glare by a 5′ roof overhang. On the east (entry) side there is another window wall and a charming paved dining terrace protected on three sides by the house. It overlooks a small grass plot and flower bed, with privacy from the street provided by a split grape stake fence, and on the back and side property lines by the old 20′ high cypress hedge.



NEW FLOOR PLAN



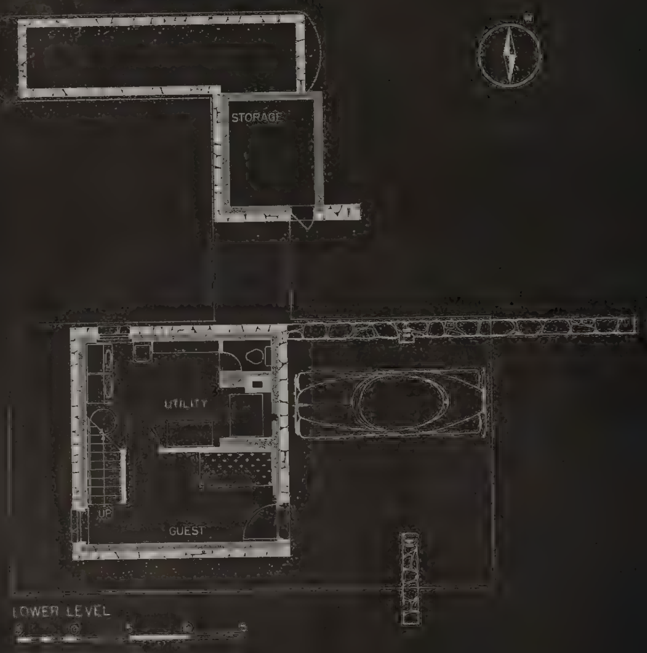
OLD FLOOR PLAN

Landscaping was an integal part of the job. The landscape architects were faced with the tough problem of the entrance from the street, which was about two stories below living level. The solution was first to build a redwood wall over the old stone side walls of the original steps, which were then filled in and planted over. New redwood steps were built up from the garage side to the lowest level of the house, there to connect with the steps going on up to the entrance. (Steps and deck on which they land are supported by large redwood beams cantilevered out from concrete anchors.) The steps going across the front of the property, their handsome handrail, and the planting all help to unify the house with its difficult, hilly site.

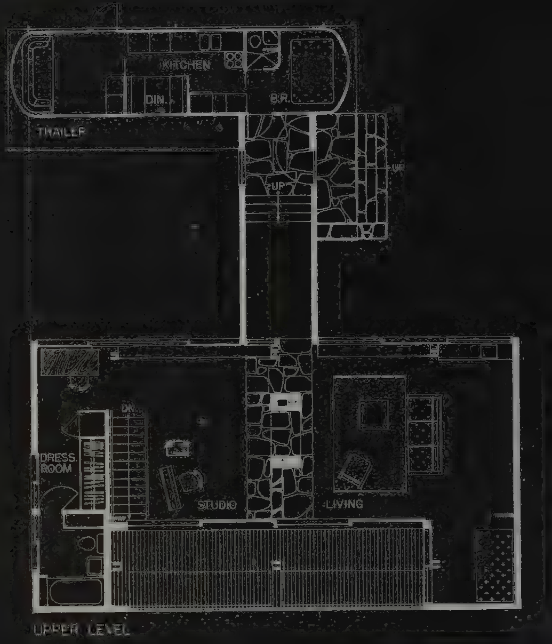
The success of this job depended largely on the close co-operation of owner, architect, landscape architect and builder, and, says the designer, is "an excellent example of the good results to be had when the clients have sure and developed tastes, and know well how they like to live."

New study-guest room, left, is where the old kitchen (below) used to be, has its own private bath. Closet- and bookshelf-wall, built out at an angle behind the living room fireplace wall, adds to its comfort and visual interest. Two walls are paneled in redwood, chief color is muted olive green, furniture modern.

New kitchen, below, has a neat and efficient line-up of modern equipment, plenty of storage cupboards. There is a pass-through at right used on kitchen side as a meal-planning desk and breakfast bar. (For dining side of pass-through, see picture opposite, top.)

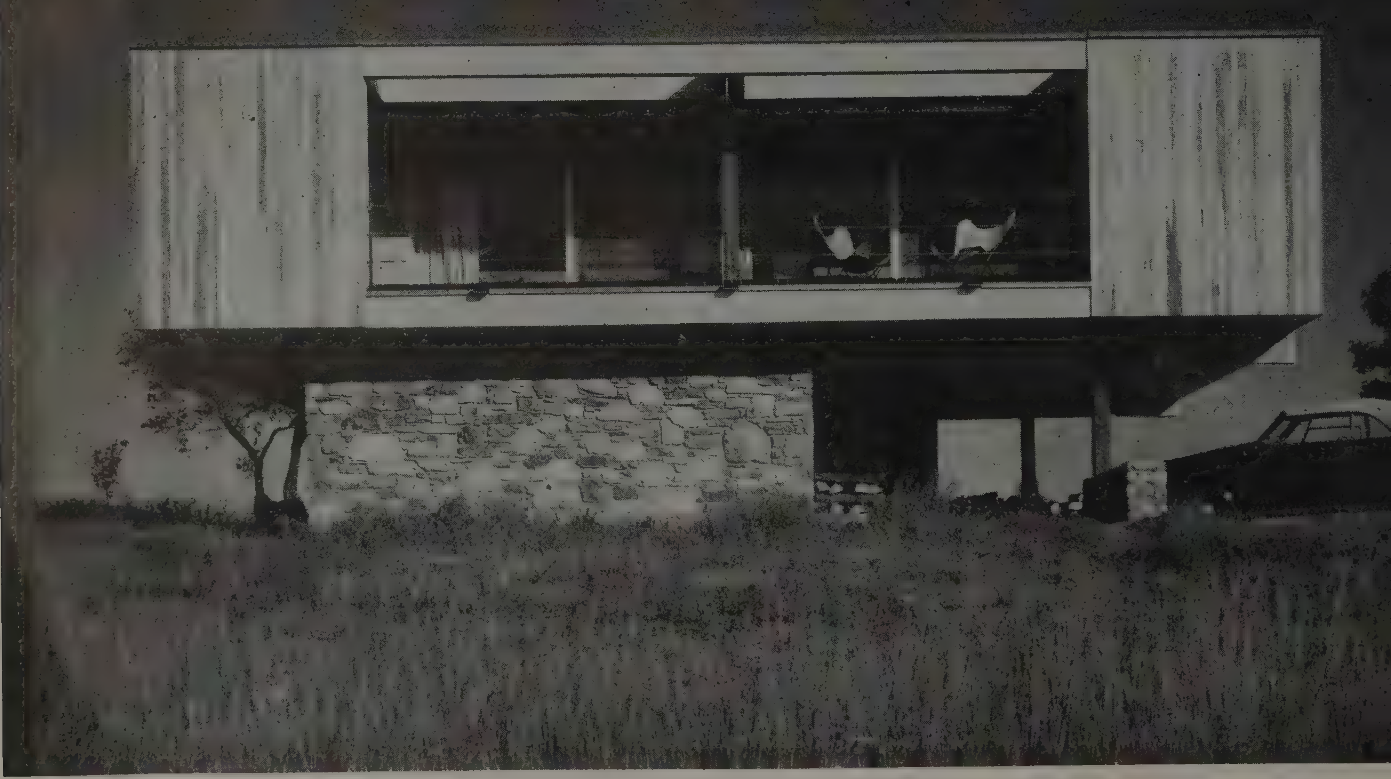


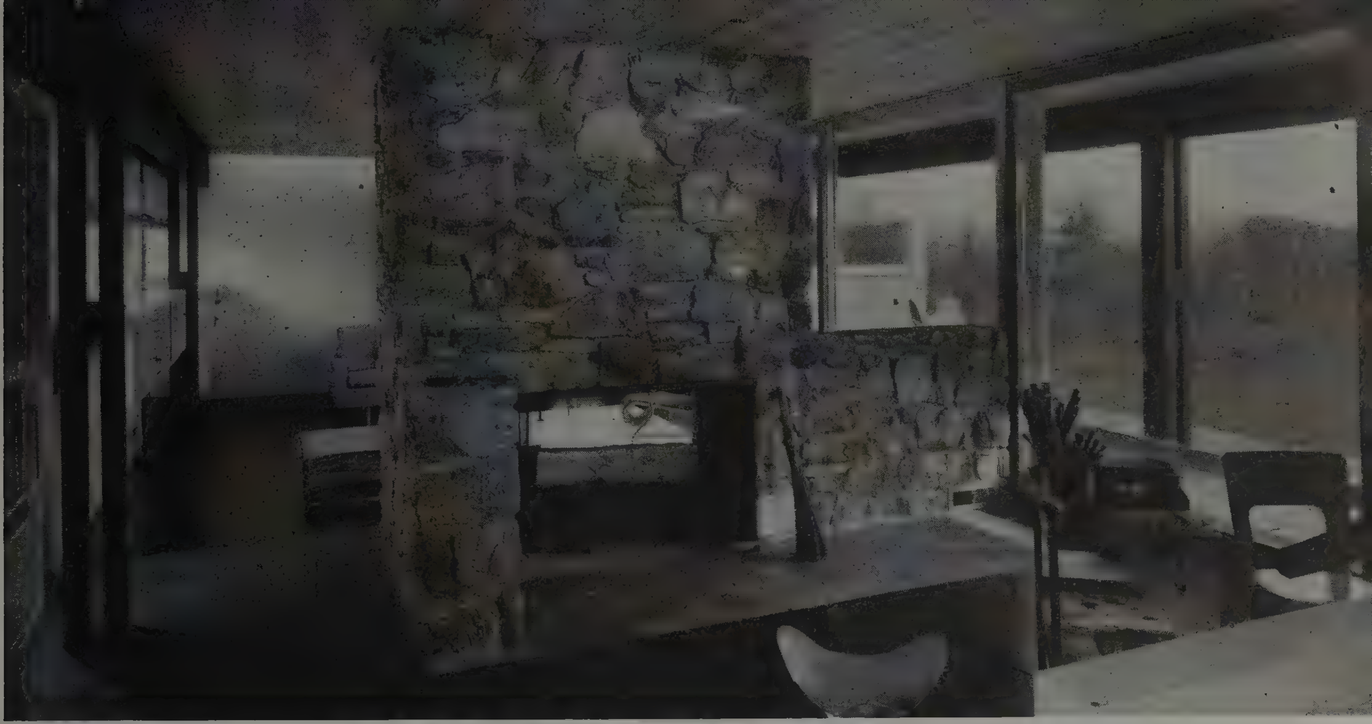
LOWER LEVEL



UPPER LEVEL

LOCATION: Pleasant Plains, N.Y.
MARCEL BREUER, Architect
SIDNEY WOLFSON, Owner & General Contractor
Theodore J. Watson & Frank Williams, Carpentry





Upper floor is divided into living area and studio by free-standing, two-way fireplace. Note double posts on both sides of structure. They hold bolted steel girders between them. Clerestories are at left.

SYMMETRICAL CANTILEVERS ON ASYMMETRICAL BASE

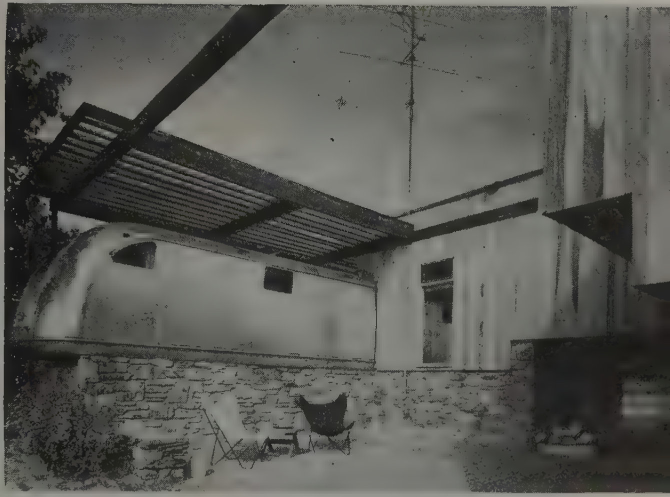
Exciting hilltop lookout adds 16,000 cu. ft. of living space to artist-owner's compact trailer home

As one of the creative architects who are revitalizing domestic architecture — to rescue the American home from the antiquarian, and embody in it today's materials, today's construction methods and today's way of living —Marcel Breuer has often been ahead of the average man's appreciation.*

Here, however, is a Breuer house whose visual excitements are as obvious as its construction is logical; a Breuer house in which anyone can see the practical reasons for the dramatic design. Here, too, is a Breuer house where the architect reveals himself in a more playful mood than in some of his more recondite work. For this house, of all things, is built around the automobile trailer in which the owner lived for three years after getting out of the Army and in which he still likes to sleep and cook and eat!

The fact that this owner preferred to keep on sleeping and cooking in a trailer is not the main point of the story, though it might suggest trailer-adjuncts to other owners as an emergency measure. Much more important is the way in which Breuer added 16,000 cu. ft. of living and working space to make his client's life less cramped and his client's site more dramatic. The way

Photos: Ben Schnall



Some years ago. Buckminster Fuller suggested a separate, mechanical core that could be wheeled up to any old farm structure. Stressed-skin, aluminum trailer wing of this house conveys some of that notion. Breuer built wood "parasol" to protect trailer against heat of sun, used area between trailer wing and living-working space for handsome garden court.

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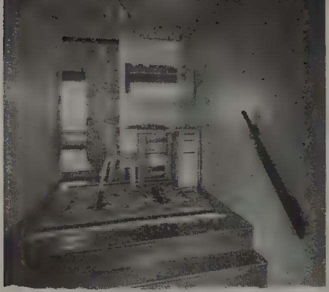
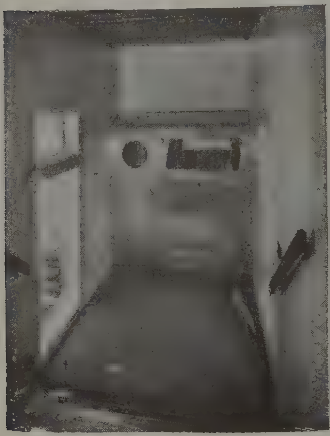
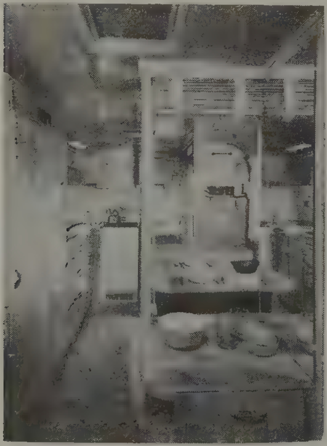
* H & H plans to publish a portfolio of his best recent houses this spring.



View from trailer toward living room shows interior of bridge connection.



Opposite view shows aluminum door of trailer. Entrance to house is in link.



Interior of trailer with dinette and kitchen area beyond.

he did it was to perch a 43′ wide wood-and-glass box on top of a 19′ wide stone pedestal—a device which gave his client an improved view of Mt. Beacon to the south, a sheltered carport under one end of the cantilevered box and a shaded terrace under the other. Moreover, the device of perching a wide, symmetrical box on a narrow, asymmetrically placed stone pedestal produced a very handsome south elevation, and an expressive and elegant structural composition.

Trailer wing

When artist Sidney Wolfson got out of the Army, he bought a $4,200 trailer, put it up on concrete blocks and lived in it for the next three years. He liked it. In a pinch, it could sleep six. But it was cramped; and its aluminum body was hot in summer.

Breuer remedied both drawbacks. For about $20,000, he built 16,000 cu. ft. of living, working and sleeping space, linked this to the trailer with an enclosed bridge, attached the bridge to the trailer's stressed aluminum skin with a gasket of marine rubber fill. To keep the trailer cool, he put up a "parasol" of horizontal *brises de soleil* above the trailer's roof.

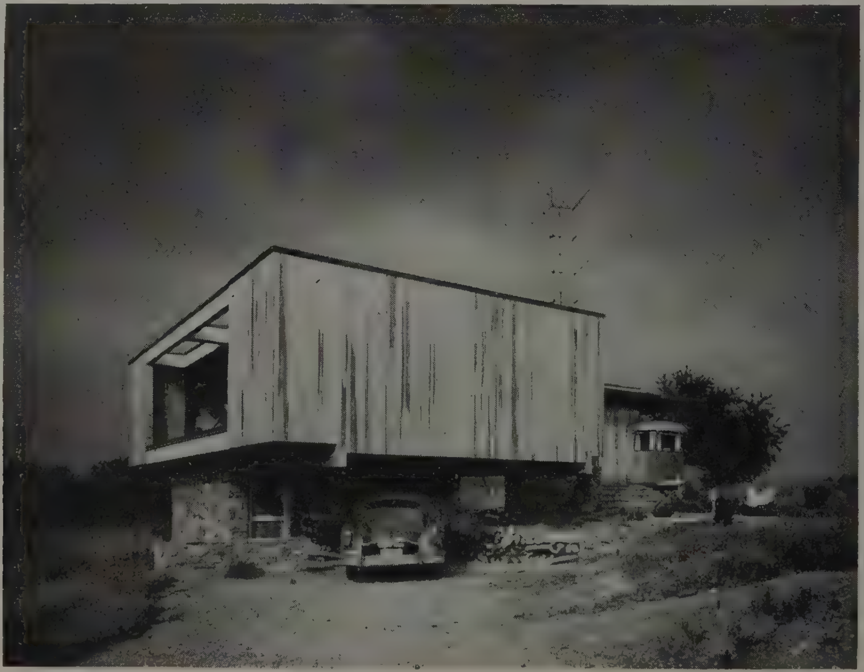
Breuer wing

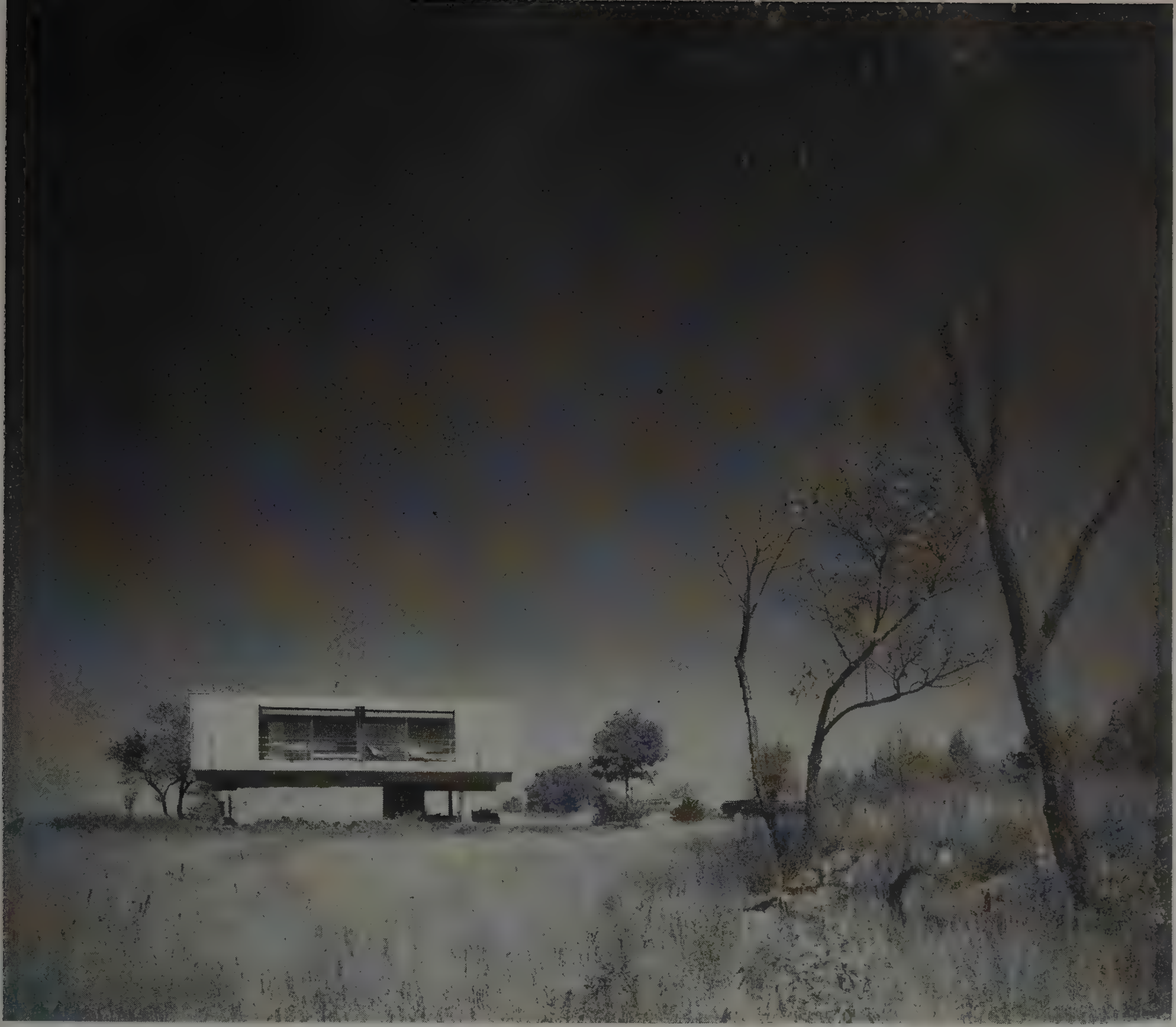
The 43′ x 24′ box that contains most of the new living space could hardly be more successful. What could be more felicitous than the proportion of wood and glass in the upper floor, or the contrast between symmetry above and the slightly off-center, stone base below?

Although the box appears to be cantilevered out from its stone pedestal, it actually rests on two steel girders supported both on the stone and on two doubled-up wooden posts. In characteristic fashion, Breuer left girders, posts and stone supports clearly exposed and so added interest to an otherwise plain side-elevation, which reveals the girders dropped below the soffit of the cantilever.

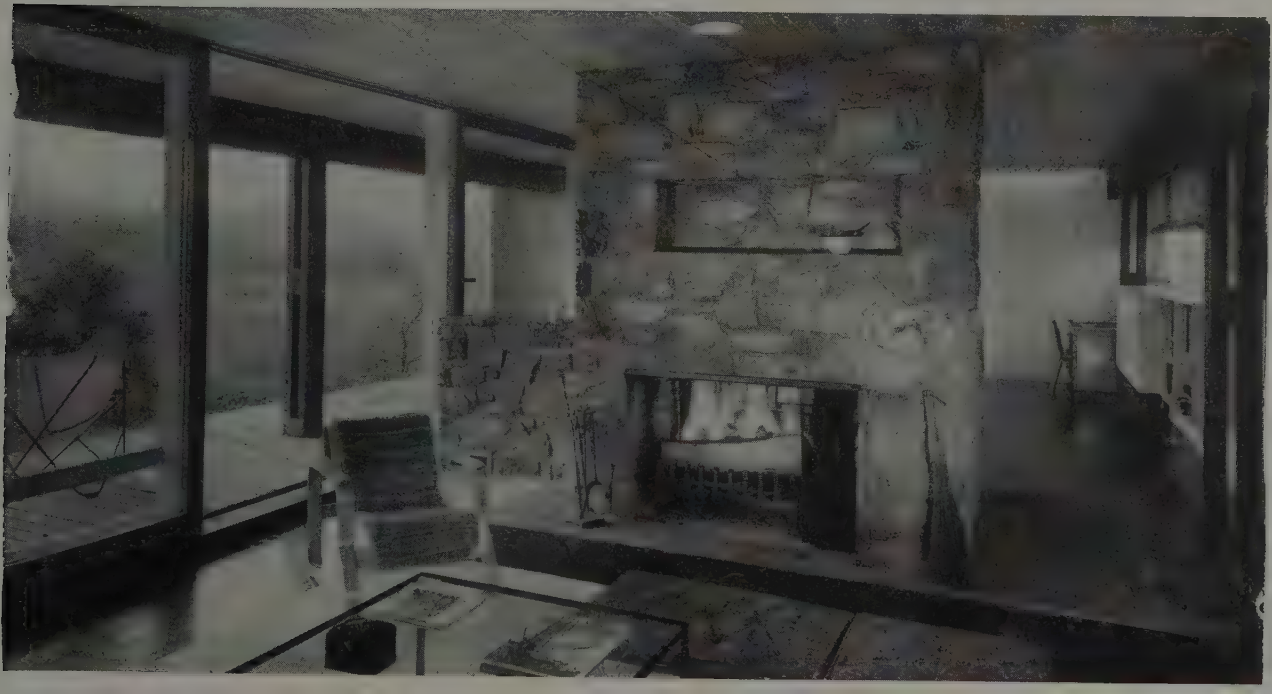
Artist Wolfson, who acted as his own contractor, is delighted with the little house. His favorite details: The suntrap balcony toward the south where, sheltered from the wind, temperatures climb to 80° or higher in midwinter; and the small court formed by the wings of the T-shaped addition and the trailer. There has been no upkeep expense whatsoever. "The only painting that needs to be done once in a while is around the trim and facias," says Wolfson, "and I can do that myself."

View of house from the east shows dropped girders under wooden box.





Seen from a distance the house seems to float above its hilltop site. Note symmetry of upper floor, asymmetrical base—and beautiful relationship between these two. Picture below was taken from living area looking toward artist's studio.



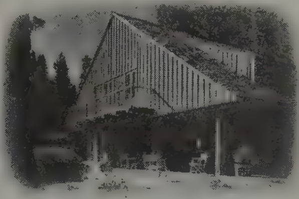
Gardner Dailey, the fine elder statesman of San Francisco architecture, has graduated from his office many a young architect. And in an area of "easy" houses designed primarily for comfortable living, Dailey has passed on to these young men his own meticulous attention to "composition," his grace and distinction. But young Joseph Esherick, whom Dailey considers a prize pupil, has added qualities of his own, which Dailey now says that *he* studies.

What Gardner Dailey sees in these houses is first of all the skill with which they express "the third dimension." This means that the houses have been developed *upward* with the same care and skill that most architects have employed on the *horizontal* planning of their houses. It means that tall rooms and low rooms, big and little, high levels and low levels, have been so interlocked that a tour through an Esherick house is a dramatic exploration. And life in such a house is correspondingly a rich and subtle experience.

Naturally, Joe Esherick as an able architect has been concerned with all the other aspects of the house. But since the principles of three-dimensional design (as contrasted with flat "paper architecture") have rarely been made so clear, the present story is concerned only with

JOSEPH ESHERICK and

his use of FORM



his use of SPACE

his use of SITE

There is an added reason. Like most architects in the San Francisco area, Joe Esherick has adhered to what is locally called "Western conservatism"—the idea that a house, however modern, should look like people's idea of a "house." This makes the idea easier to follow. But an understanding of the way form and space works in Esherick's houses will carry the attentive reader a long way toward the comprehension of modern houses of other kinds, where the design has been more geometric and the approach more abstract.

Joe Esherick was born and educated in Philadelphia, got his architectural degree at the (then) Beaux-Arts-oriented University of Pennsylvania. Upon leaving Penn, he went to work for his uncle, the sculptor and cabinetmaker Wharton Esherick, and, later, for sculptor Jim House. Both men worked largely in wood; this gave Esherick a sense of sculptural form that characterizes his detailing and composition to this day.

House also showed him something about anatomy. "I learned a great deal about structure and architecture that way," Esherick says. When he had learned that lesson he went off to Europe for six months, came back to Philadelphia to work for George Howe. By the spring of 1938 he had saved enough money ($55) for a coach ticket to San Francisco, has worked there ever since—since 1945 for himself.

Although Philadelphian Esherick is now a dyed-in-the-wool San Franciscan, his "three-dimensional" qualities would count anywhere. Its chief characteristics are

the use of powerful forms—both in his wood detailing, and in the composition of architectural elements (which he likes to draw together with sweeping diagonal lines);

the use of interlocking small and large spaces—with space flowing from one to the next, up and down and around. To understand how "space flows," it is well to imagine the house as a container filled with a flowing liquid instead of air, and to watch the liquid move about, from space to space, through large and small openings, up, down and sideways, and fill every nook and cranny;

and the use of architecture as a landscape-element. In a climate where outdoor living is vastly popular a house is very often seen from the outside. To make the house enhance the site (and the site the house) is one of Esherick's constant efforts. Moreover, he has realized that the space *around* a house behaves much like the space inside: it also tries to find ways of "penetrating" the structure, of flowing around it, of keeping itself from getting bottled up in patios and inside corners.

Half a dozen Esherick houses on the next ten pages will demonstrate these points . . .

← *Ernest Braun*

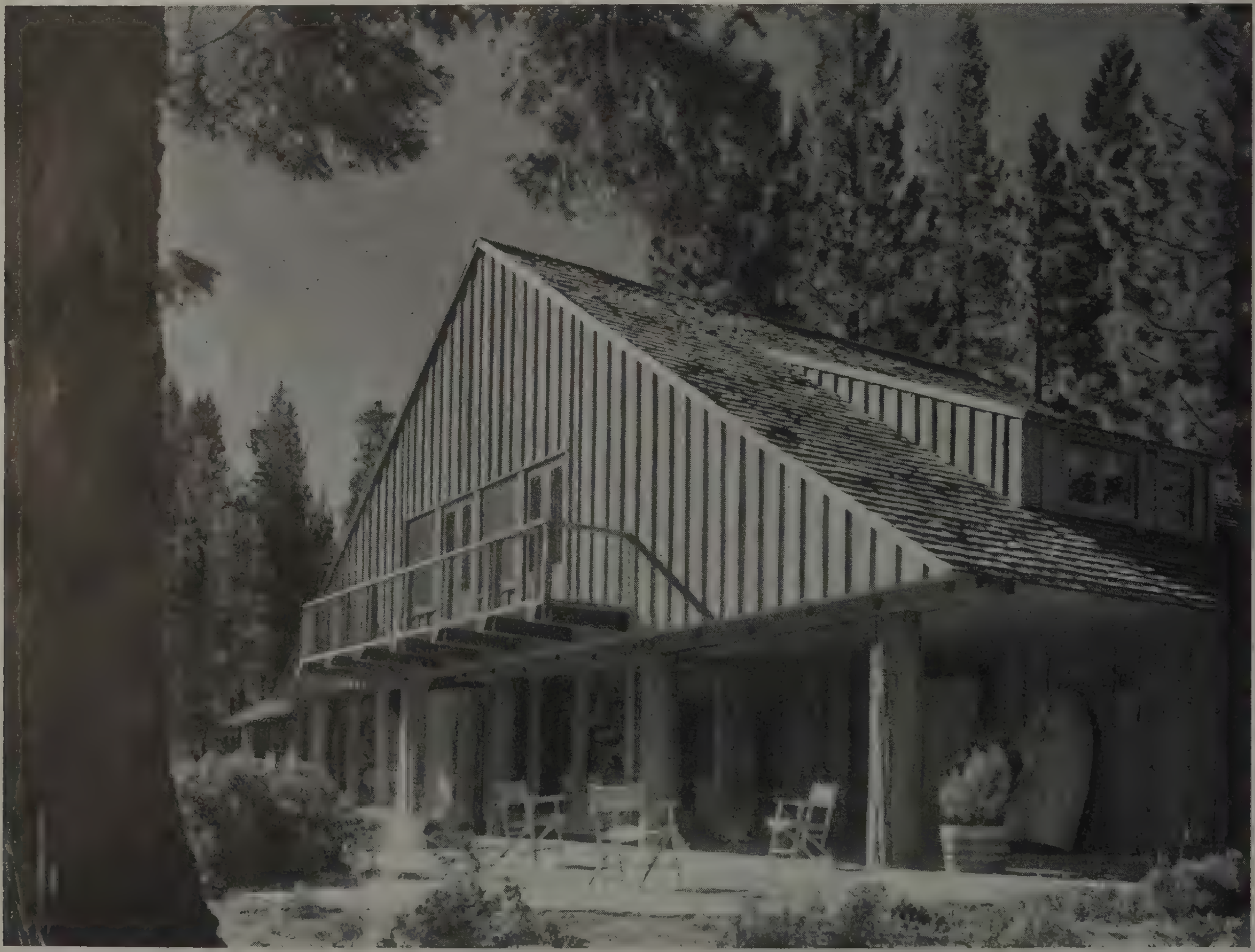
THE USE OF FORM

"We work mostly with wood out here," says Esherick, "and I have tried to get the most I could out of pretty conventional methods . . . I always use some module. I like the consistency this gives. I like the fact that, in passing from one room to another in a house . . . you somehow get in advance some vague idea of what the form and patterns will be. I don't like the structure to have surprises. . ."

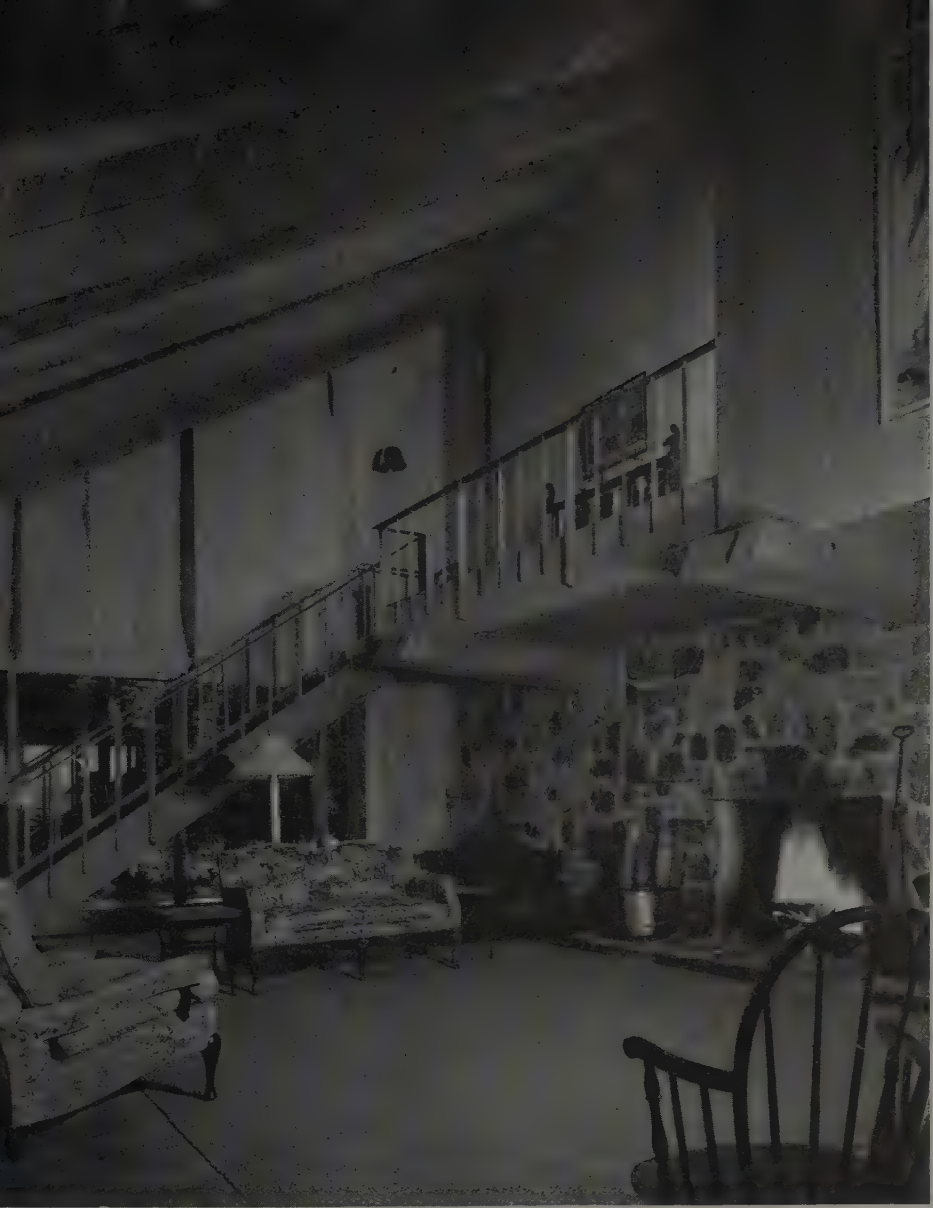
The use of form Joe Esherick probably learned during his sculptor's apprenticeship more than anywhere else. Two ways of using wood forms are most clearly demonstrated in his work:

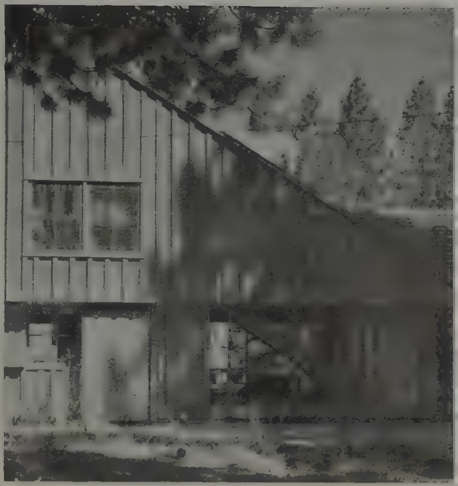
1. The use of sculpturally expressive wood details—e.g. massive post-and-lintel connections, roughly hewn beams, and expressive revelations of the stud-frame module in roof overhangs, trellises and elsewhere. And
2. the use of the diagonal, the triangular frame—the strongest shape in any structure. This, of course, is best shown in his use of the roof truss as a sculptural element. But triangulated wood panels appear in other parts of his houses also.

Photos: Ernest Braun



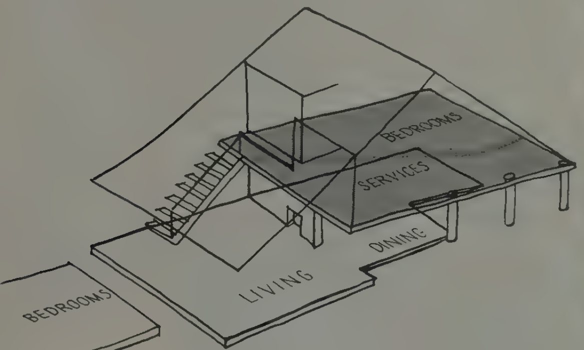
THE SECOND STORY of the big lodge at Lake Tahoe is supported on massive tree trunks, their bark left untouched. These trunks are topped with flat wood girders. The triangular roof structure sits directly on these girders. Note the razor edge of the triangle, in contrast to the rough-hewn look of its supporting structure.





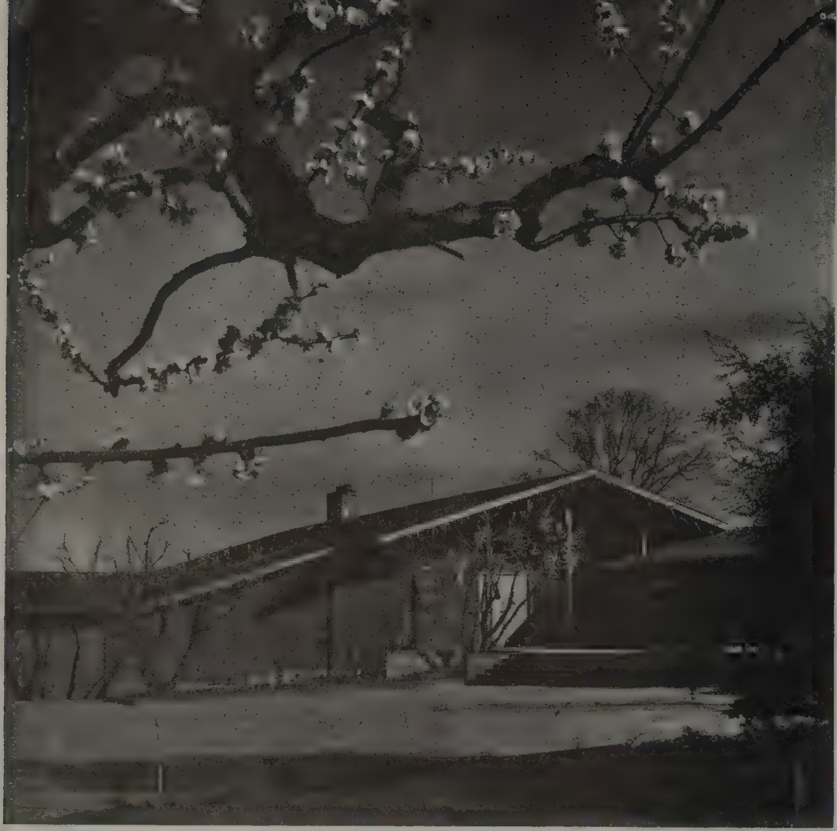
THE OTHER SIDE of the Lake Tahoe lodge: the same triangular lines, the same board-and-batten finish. Note how Esherick recalls diagonal roof line in the stair—which was left open to the eye through a glass wall. The way that same diagonal theme—roof line repeated in the stair—looks from the inside is shown in the picture to the left. The heavy roof timbers emphasize the direction.

INSIDE THE LODGE (see above and right) this same structural idea is repeated: rough, flat timbers placed side by side to form cantilevered girders, supported on a massive base (the stone wall, in this case) and a crisp, neat form on top.



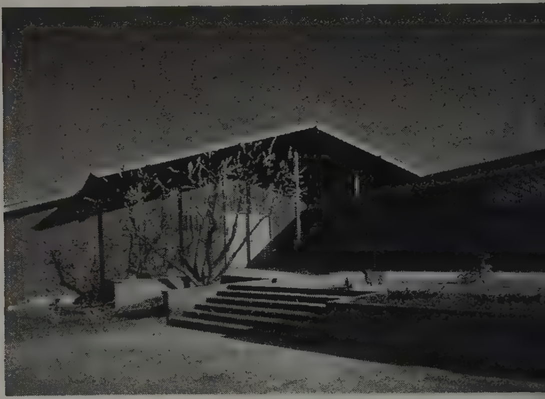
Diagrammatic plan-perspective of the Tahoe main house shows mingling of spaces and diagonal forms.

THE USE OF FORM



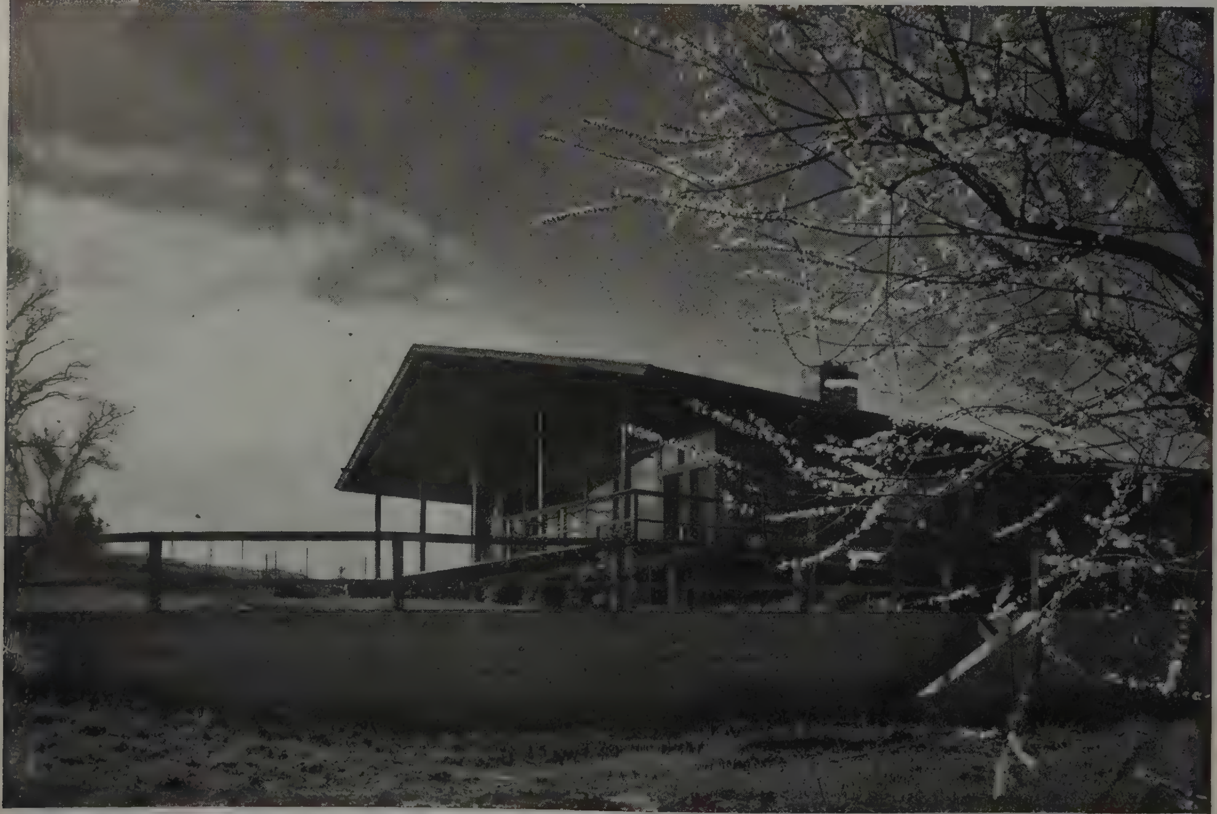
IN HIS SACRAMENTO HOUSE Joe Esherick uses the diagonal line to overcome rapid changes in grade. . .

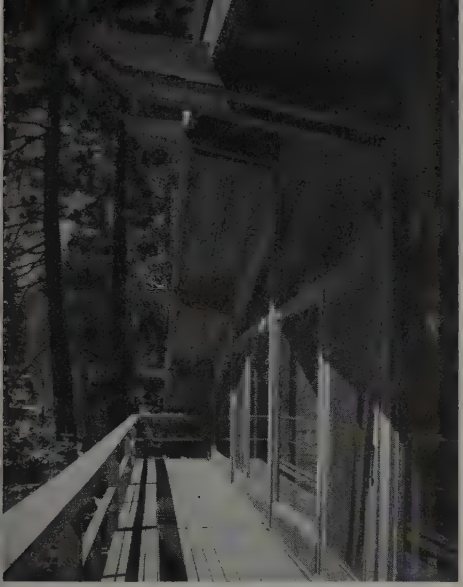
. . . and then he reverses it and lets it dip down to tie in the pitched roof of the garage wing.



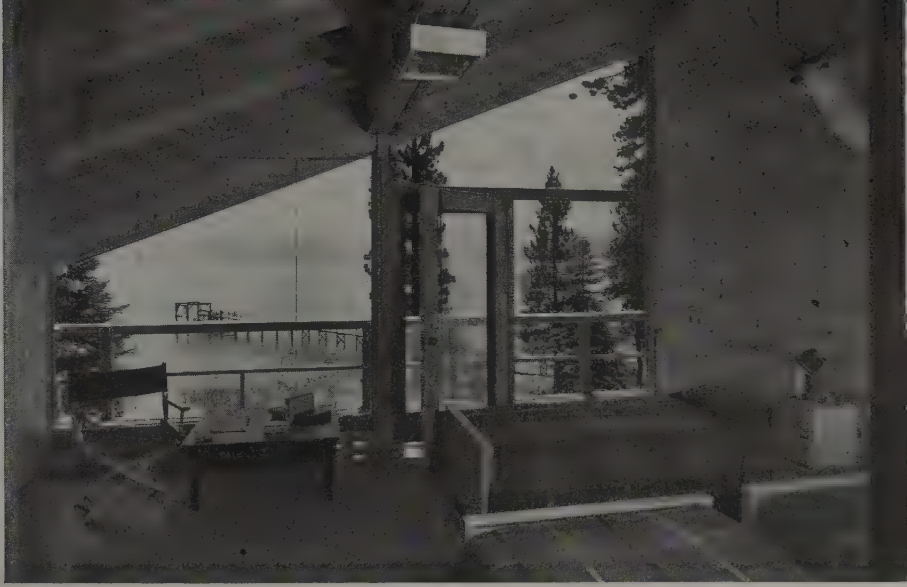
IN THAT SAME HOUSE, the bold triangle shape of the roof frame is used also to tie the house into the site (as we shall see later on). By making his ridge project beyond the line of his eaves, Esherick gives his gable end the directional quality he needs to point toward a dramatic view.

Photos: Roger Sturtevant



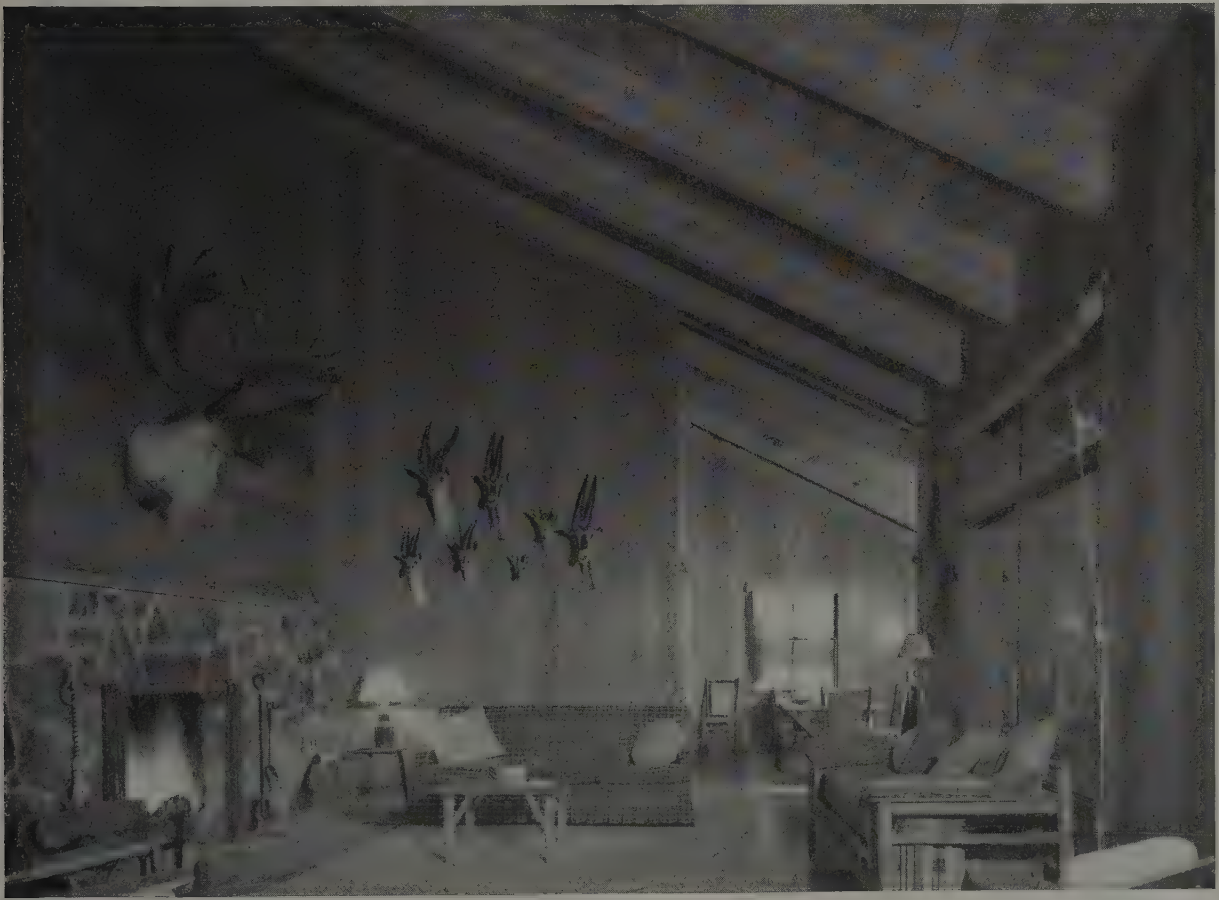


ALTHOUGH THIS TAHOE HOUSE does not have the pointed gable end, its gable has a similar directional quality because of the pointed and projecting purlins. This detail is smoother than the massive details in the Tahoe lodge, but it is just as sculptural.



THE INTERIORS of the same Lake Tahoe house, looking out from under the roof triangle.

IN ANOTHER HOUSE (below) on Lake Tahoe, Esherick has used the diagonal roof to make a relatively narrow and tall living room appear wider and less cramped.



Ernest Braun

As Esherick uses it, the wooden triangle with its diagonals gives direction to a space and cuts up tall and narrow wall panels. On the next three pages we shall see how this and other devices can be used to relate small and big volumes to one another.

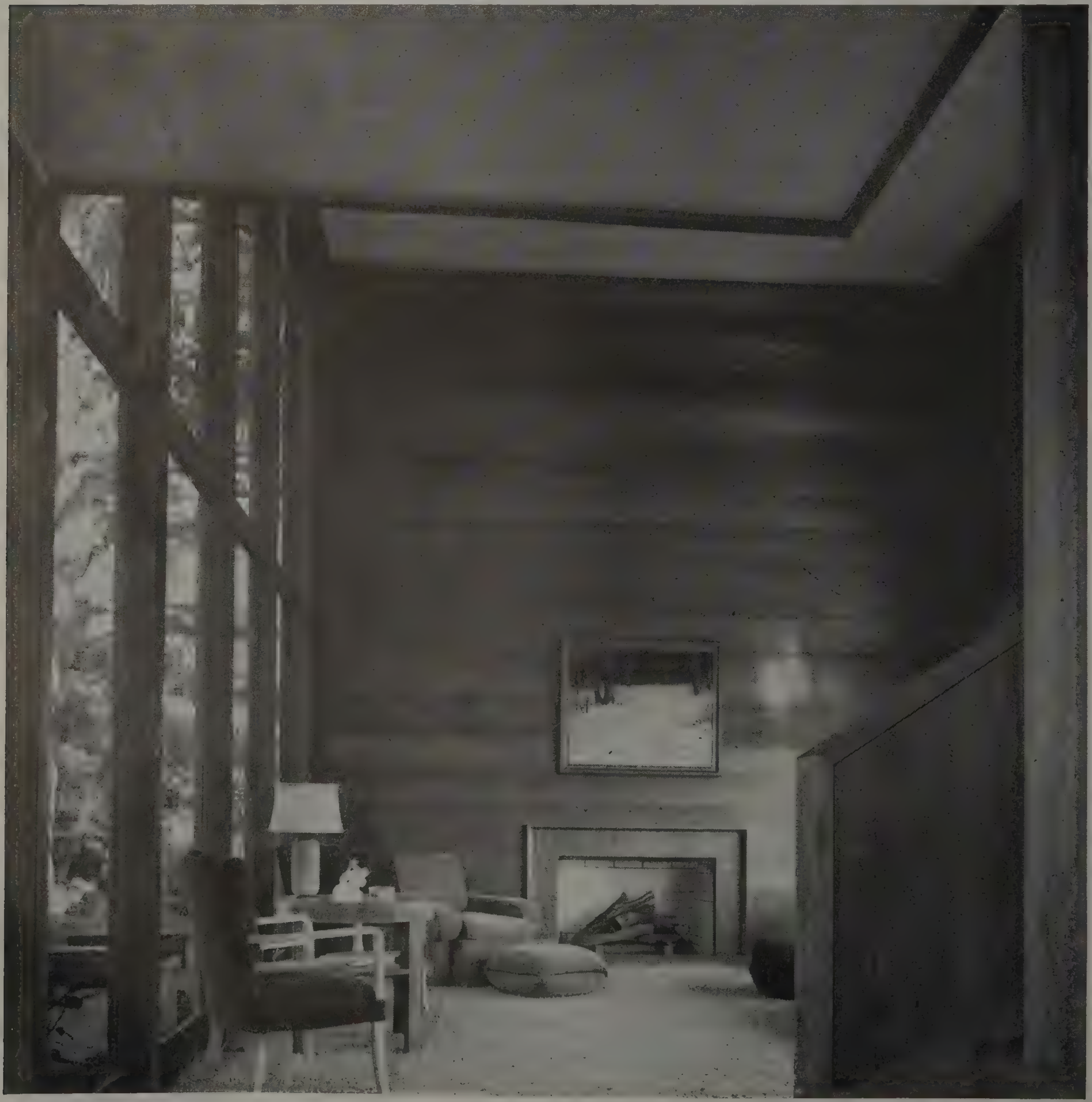
THE USE OF SPACE

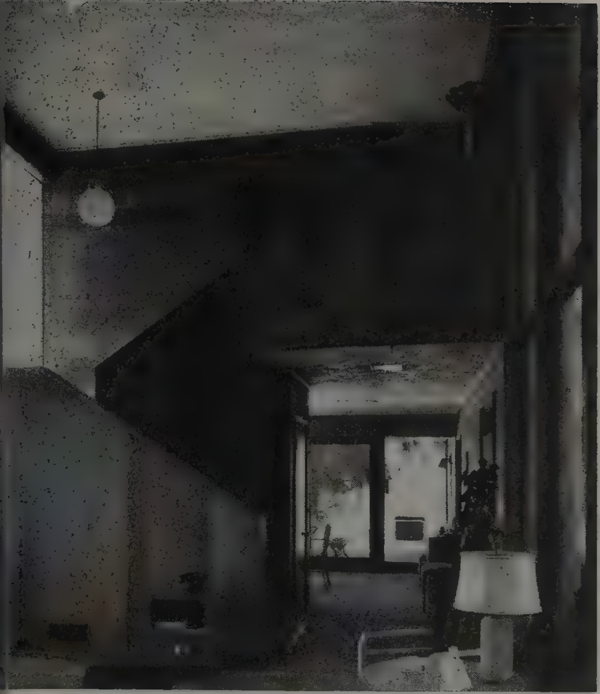
> *Lao-tse once said: "From its hollowness arises the reality of the vessel; from its empty space arises the reality of the house. Therefore by the existence of things we profit. And by the nonexistence of things we are served."*

Joe Esherick's "materials"—with which he builds his houses—are interlocking volumes, continuous channels of movement. Esherick likes to contrast small, narrow and low passages with high and dramatic spaces into which these passages lead. He likes to carry one structural idea—the post and lintel, or the triangle—through his spaces to tie them together.

The "reality" of Joe Esherick's houses is the flowing space—or, better still, the flowing volume—that animates their "emptiness." In creating such flowing volumes, Esherick has run into several problems and has solved them with ingenuity and fresh ideas:

THE END WALL of the San Rafael living room is taller than it is wide. Esherick kept the room from looking like a corridor (a) by using the strong horizontals of wide redwood boards in the paneling; and (b) by having large glass panels on both sides of the room. (See large picture, opposite page.) The light streaming in from both sides gives the room extra "volume"—a sense of greater width than it actually has. The underside of the balcony (right) gives the passage its low ceiling height. Stepping out from under it, you are at once struck by the drama of the two-story volume of the room.

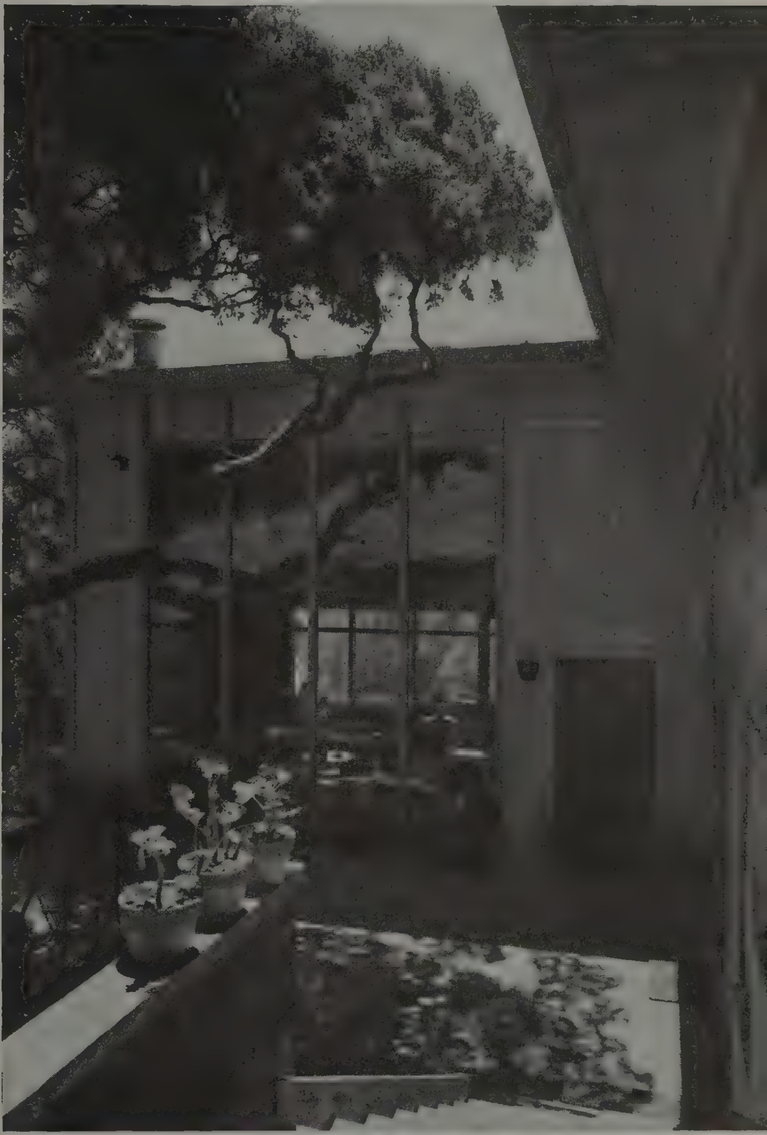


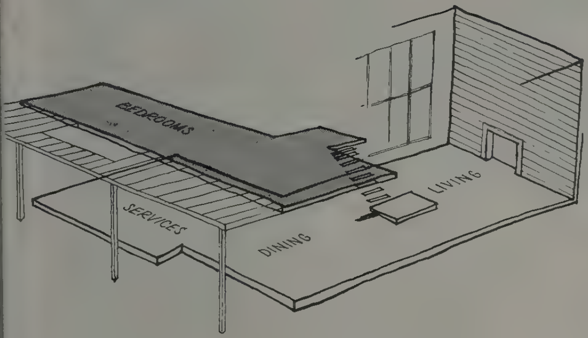


Photos: Roger Sturtevant

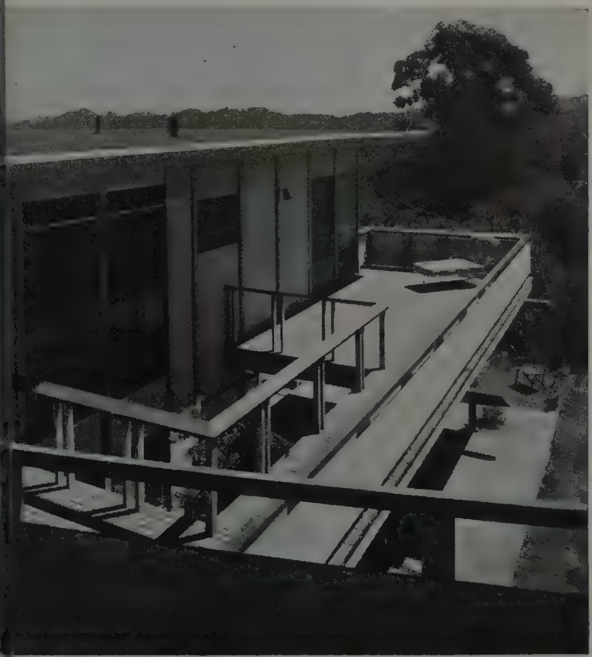
THE OPPOSITE end of the San Rafael living room presented a similar "corridor" problem, was solved with a composition of interlocking triangular forms. Note low ceiling height of entrance passage—a device to heighten drama of tall living room.

TO KEEP EXTERIOR SPACES and volumes from being blocked and bottled up by the house proper, Esherick uses a good many through-views in his houses. The picture below shows the view through the San Rafael living room.

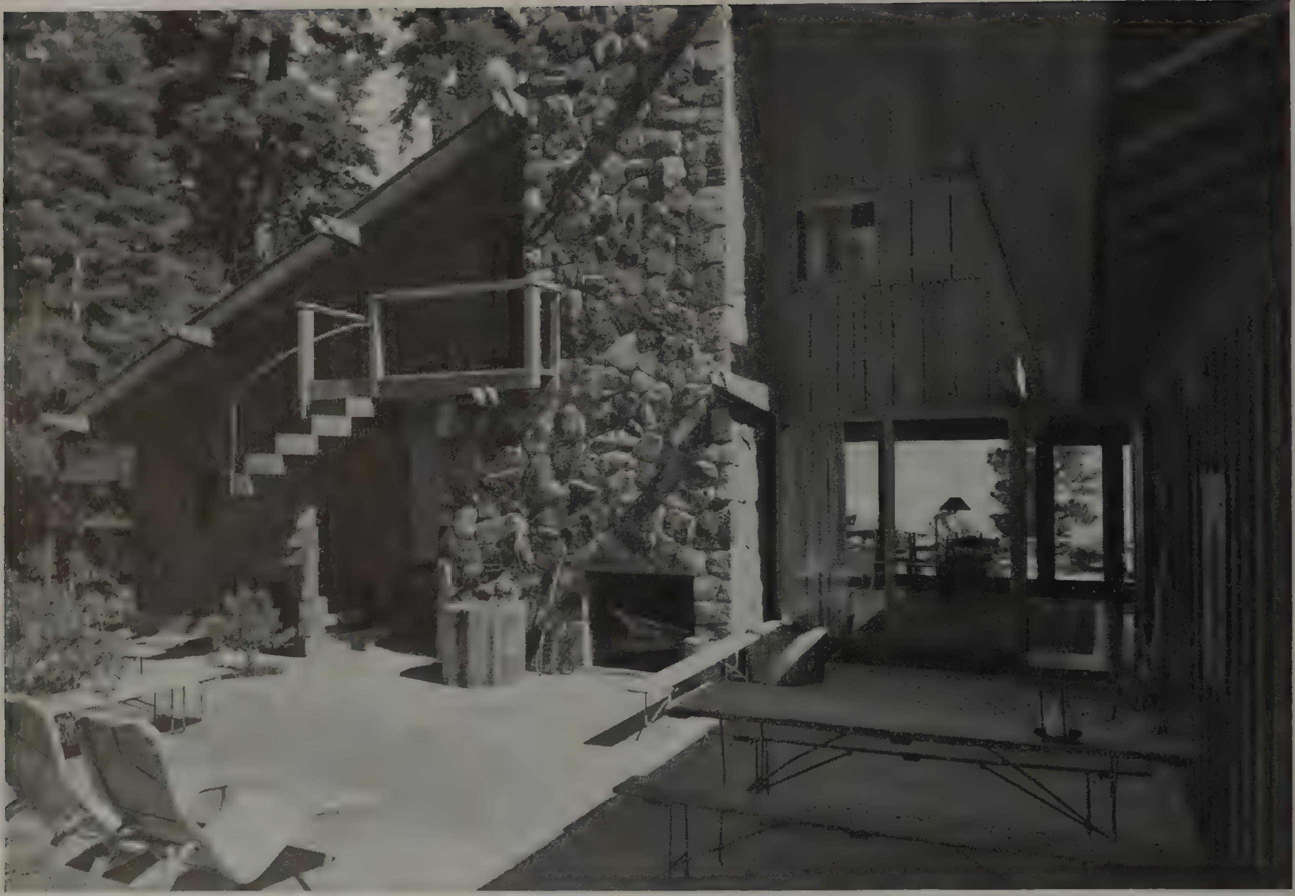




DIAGRAMMATIC plan-perspective of San Rafael house shows relationship between two-story living room and rest of house.

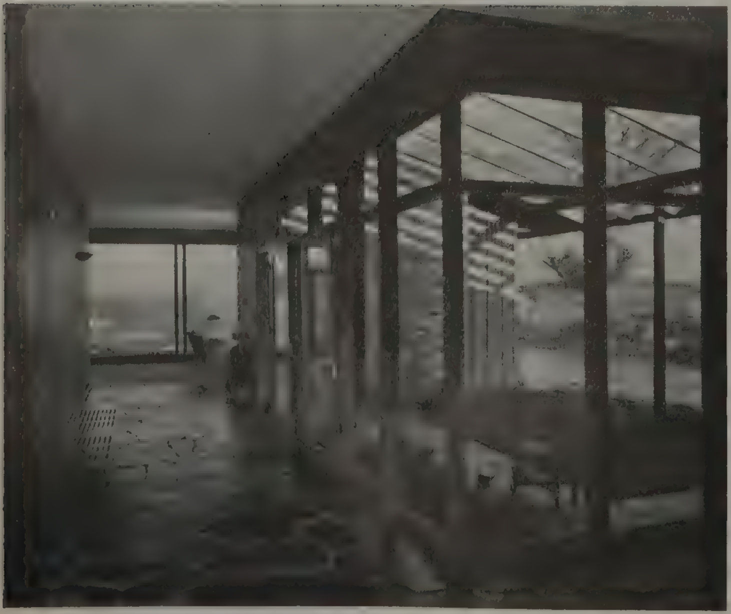


THE PICTURE TO THE LEFT shows the San Rafael balcony, which has a large hole cut into it in order (a) to let the upper and lower levels be seen simultaneously; and (b) to permit the space surrounding the house to flow up, and around, and over, and past it.



THIS TAHOE HOUSE uses the two principles demonstrated on the previous page—but in a somewhat different fashion. It is transparent in parts, so that there is a sense of continuously flowing space, all the way through the house. But the visual relationship of upper and lower floors is established by the curving line of the reinforced concrete stair — a massively sculptured spiral that also helps tie the slanting roof line to the ground.

Photos: Roger Sturtevant



AND IN THE SACRAMENTO HOUSE, Esherick permits surrounding space to flow not only into and through the house, but upwards through a roof trellis as well. About this picture he says: "The perfectly blank, windowless west side of this house does two things: It doesn't let any sun in and it hides the view until you open the front door and look down the gallery and on out. Opening the door is pretty dramatic."

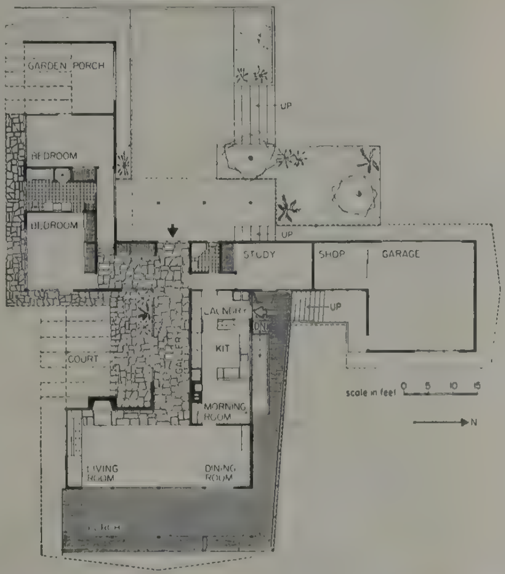
Naturally, these experiments with exterior space lead directly to the problem of relating house to site. Esherick's successes in that direction are discussed on the opposite page.

THE USE OF SITE

"The field you are in looks like any of the others you have passed through," Esherick says about his Sacramento house, "until you see that what appears to be just the crest of a little rise is actually the edge of an 80′ high bluff. From the edge there is a beautiful view of a bend in the American River below, then on over the still dry foothills to the Sierra beyond. . ." And about the Tahoe houses: "It is the unique case where most of the time you are someplace where you are looking or can look back at the house. You do not live in the house at all, except at night."

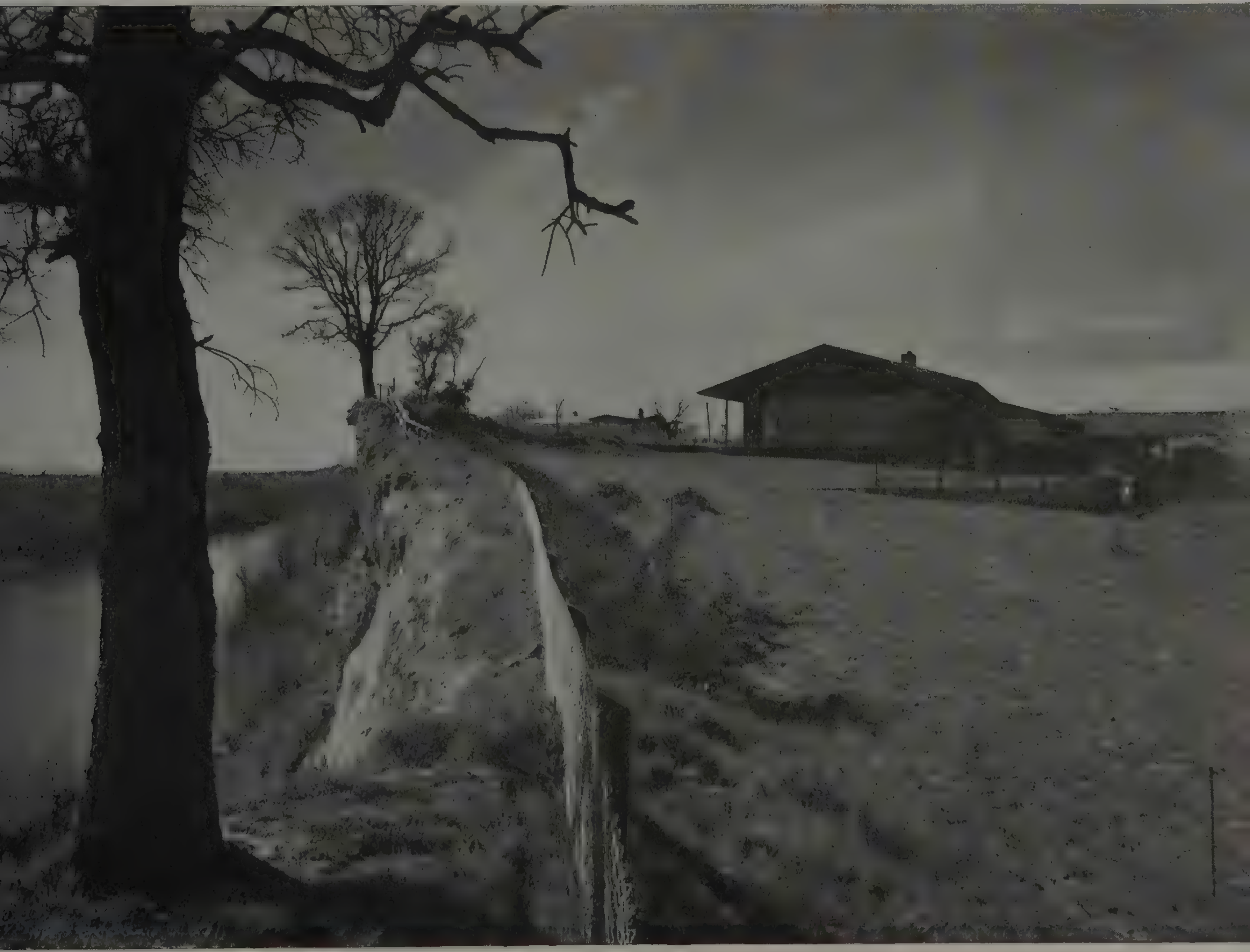
To Joe Esherick, the space outside a house (which is the site) is indivisible from the space inside. Moreover, since so much living goes on around his houses rather than inside them, they must look right in their setting—just as a fireplace must look right in its wall.

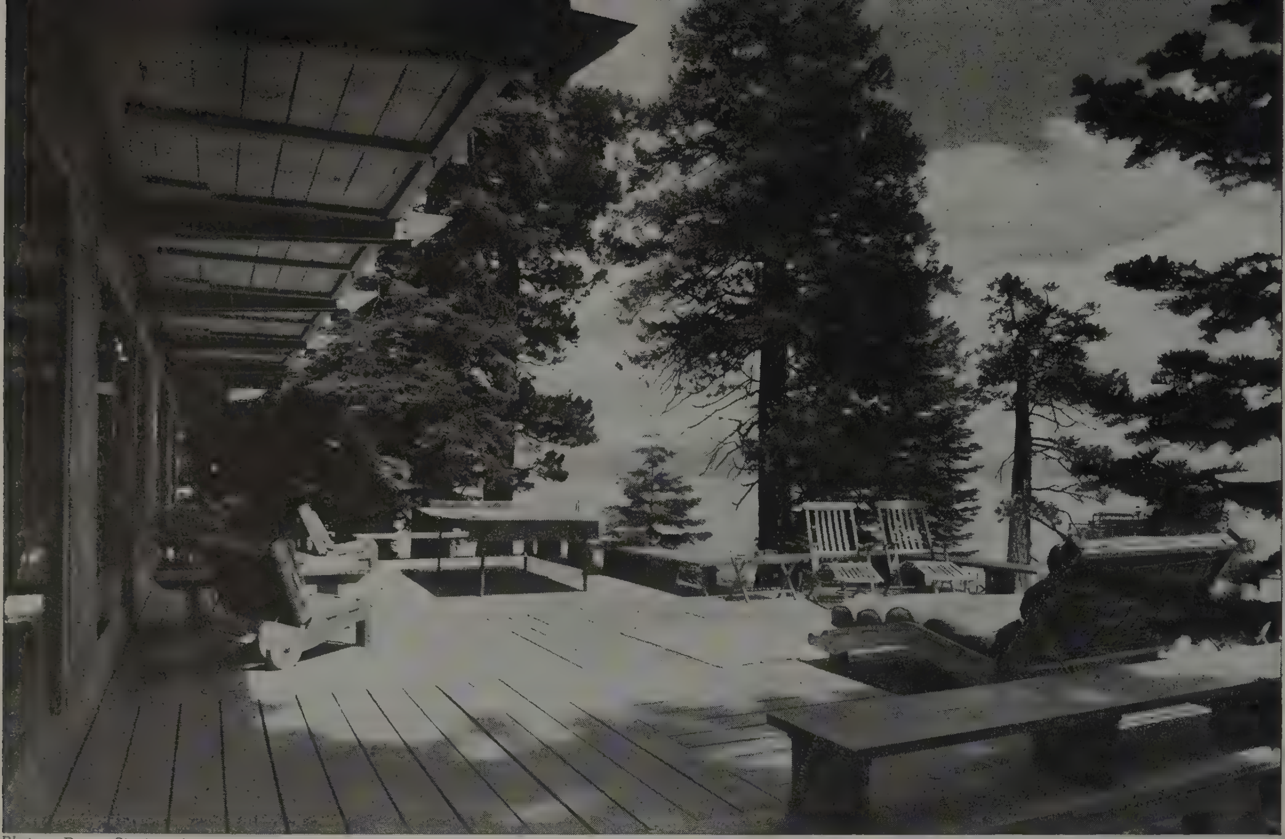
Here are some of Esherick's houses that "look right" in their setting—here, too, are the reasons why:



Plan of rambling Sacramento house

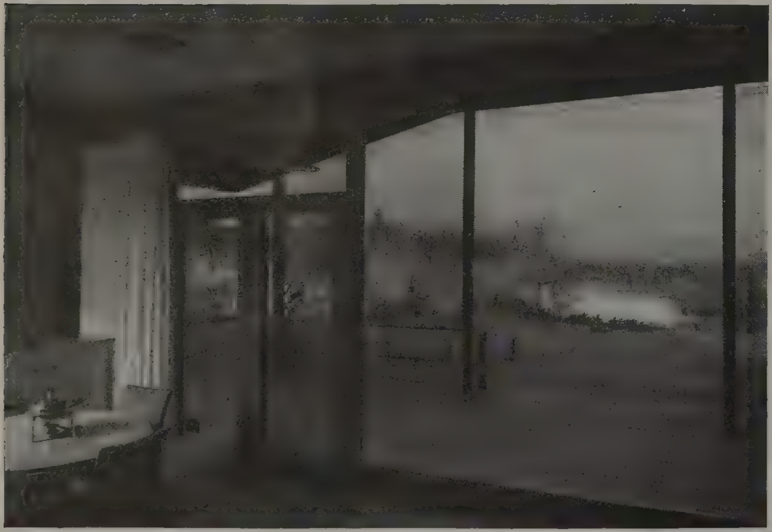
THIS IS THE SACRAMENTO HOUSE (the one Esherick described above). Note how the gentle slope of the roof blends into the gentle roll of the land.





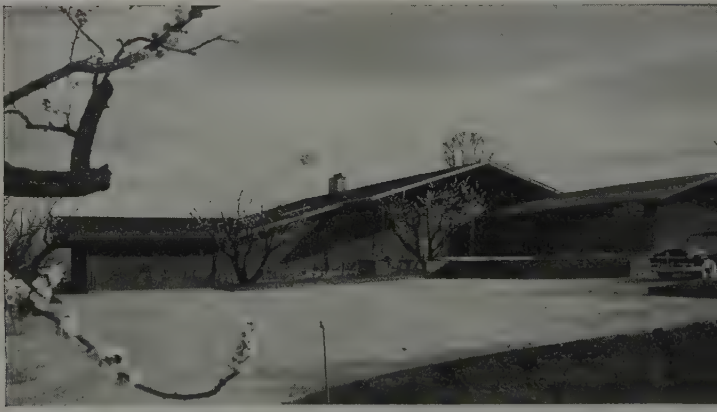
Photos: Roger Sturtevant

IN THIS HOUSE on the edge of Lake Tahoe the flat plane of the wide terrace is a reflection of the flatness of the lake beyond. The trees are left untouched by the architecture. (Incidentally, the sunshades in this house can be dropped down to cover the glass wall when the owners are away.)

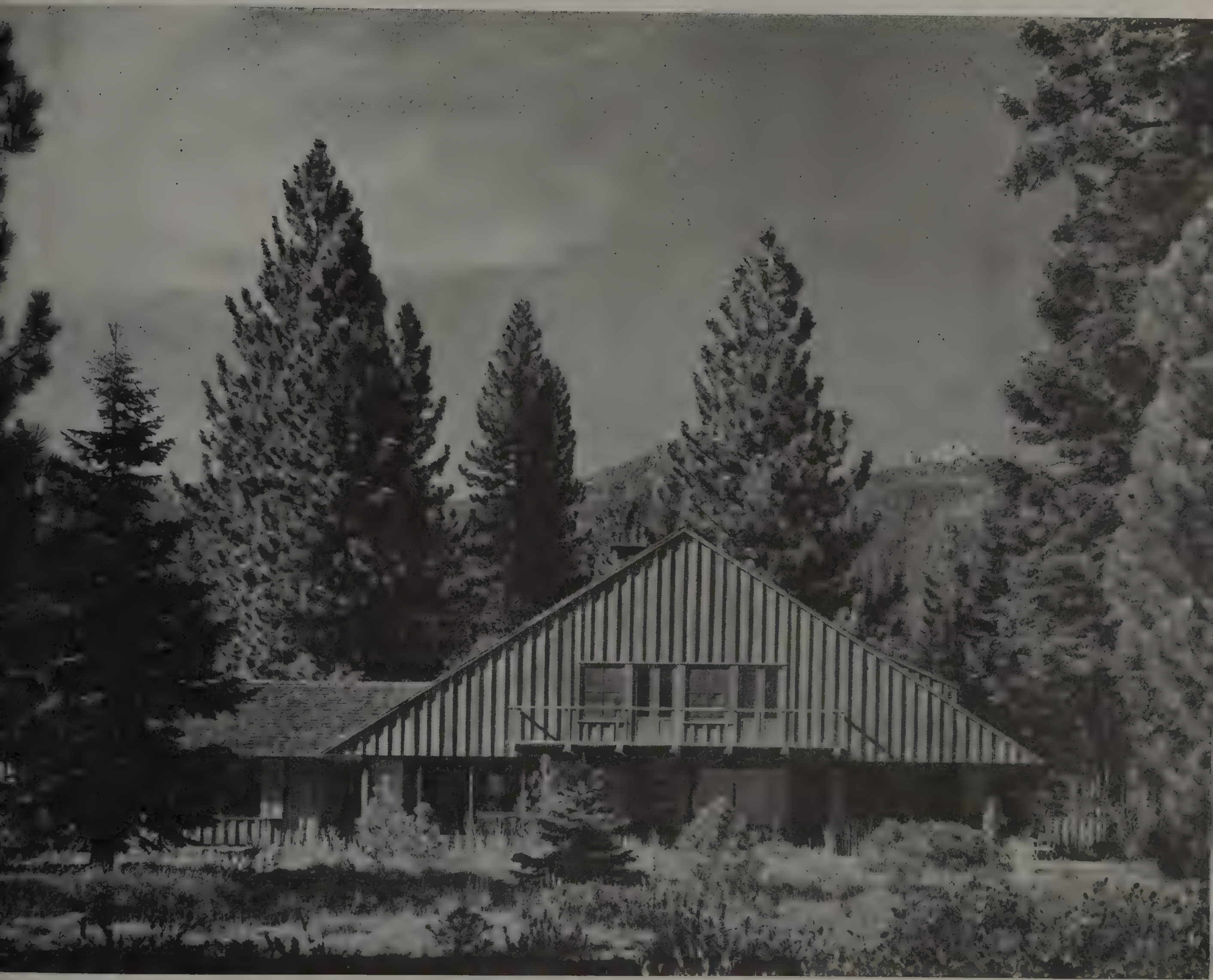


THIS IS THE "DRAMATIC VIEW" Esherick talks about when he speaks of his Sacramento house: the American River in the foreground, the Sierra in the distance.

IN THE SACRAMENTO HOUSE, changes in grade were gracefully bridged with the long, low-slung diagonal of the roofs. The diagonal parallels the slope of the land.



AND IN THE TAHOE LODGE the problem was that "most of the time you are someplace where you can look back at the house." So the lodge was made to look very much like another beautiful mountain crest; the vertical boards and battens were designed to recall the verticality of the tall trees; the strong triangular shape designed to tie the house firmly to the ground and make it part of its site.



Ernest Braun

Esherick's severest critics say that his houses don't go far enough—that the vacation lodges in particular are just "Swiss chalets" with a modern treatment. The answer of "Western conservatism" is that the architect is at his best when he ennobles those ways of building and living which the *community* has evolved; that change for its own sake is merely "showing off." Whatever attitude is taken toward tradition or popular building, all architects may well study the three-dimensional qualities of Joe Esherick's work.

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Lichenaceous ornament

By John Lloyd Wright, AIA

To many a modern architect the word "ornament" is a dirty word. Yet during the 20 years of its banishment a good deal of Ornamental Sin seems to have crept into the once pure devices intended to replace it. Ideas of "natural planting," of "texture," of "painted pattern," and of "the building itself as the ornament" have developed alarmingly into the cults of the rotten branch, the corrugated corroboree, the Mondrian abstract, or the building as a giant mushroom, a flying wedge, an uptilted umbrella. In other words, the choice seems to lie no longer simply between ornament and no ornament. A new choice has been added: ornament sub rosa. Perhaps an open discussion is again in order.

John Lloyd Wright proposes a system based on nature and recalling the once anathematic ornament of the jigsaw. Technically the jigsaw enthusiasts 100 years ago were enjoying an age of plentiful wide boards that could be filigreed with their enchanting new tool. Today Wright appropriately suggests the use of little sticks—all we have left that is not too precious—and running them through the table saw.—Ed.

A magnificent expression of enrichment in nature, integrated to structure, is the lichen on the rock. Lichens of gray, yellow, brown, black or greenish blue color are found the world over: from frozen North to tropical South, from beaches to loftiest mountain peaks. Over 4,000 species of this strange, beautiful flowerless plant have been described.

The lichen could not exist without the rock. The rock could exist without the lichen, but this unique partnership of overlaid pattern harmoniously enriches the rock.

Through the ages architecture has had many forms of enrichment. They can be grouped under three headings: (1) Structural ornament; (2) Natural ornament; (3) Applied ornament. Let us sum them up briefly.

Structural ornament is integral with the structure and cannot be separated without the collapse of the structure or the weakening of that part from which it has been removed. No ornament could convey more beauty and sincerity than structural ornament. But today, though the architect be endowed with the imagination necessary to produce the effect that satisfies man's craving for beauty through structural ornament alone, the cost in most cases would be prohibitive.

Natural ornament is produced by finely proportioned arrangements of plants, grasses, trees and flowers. No ornament would more nearly satisfy and uplift man than natural ornament. It is wonderful. But here we are faced with the fact that even though a fantasy can be created through natural ornament alone, there is involved the problem of constant care and upkeep. Yet natural ornament *can* be effectually and economically used to enhance all other types of ornament.

Applied ornament or ornament on the surface, used solely to produce an effect upon structure but not related to the structure, has no worthy place in architecture. This condemnation of applied ornament should not be extended to the idea of adding independent works of art, if these are compatible with the uses of the structure, even though they are not directly related to the structure. Compatibility is as important as relationship. And compatibility yields relationship of spirit if not of letter.

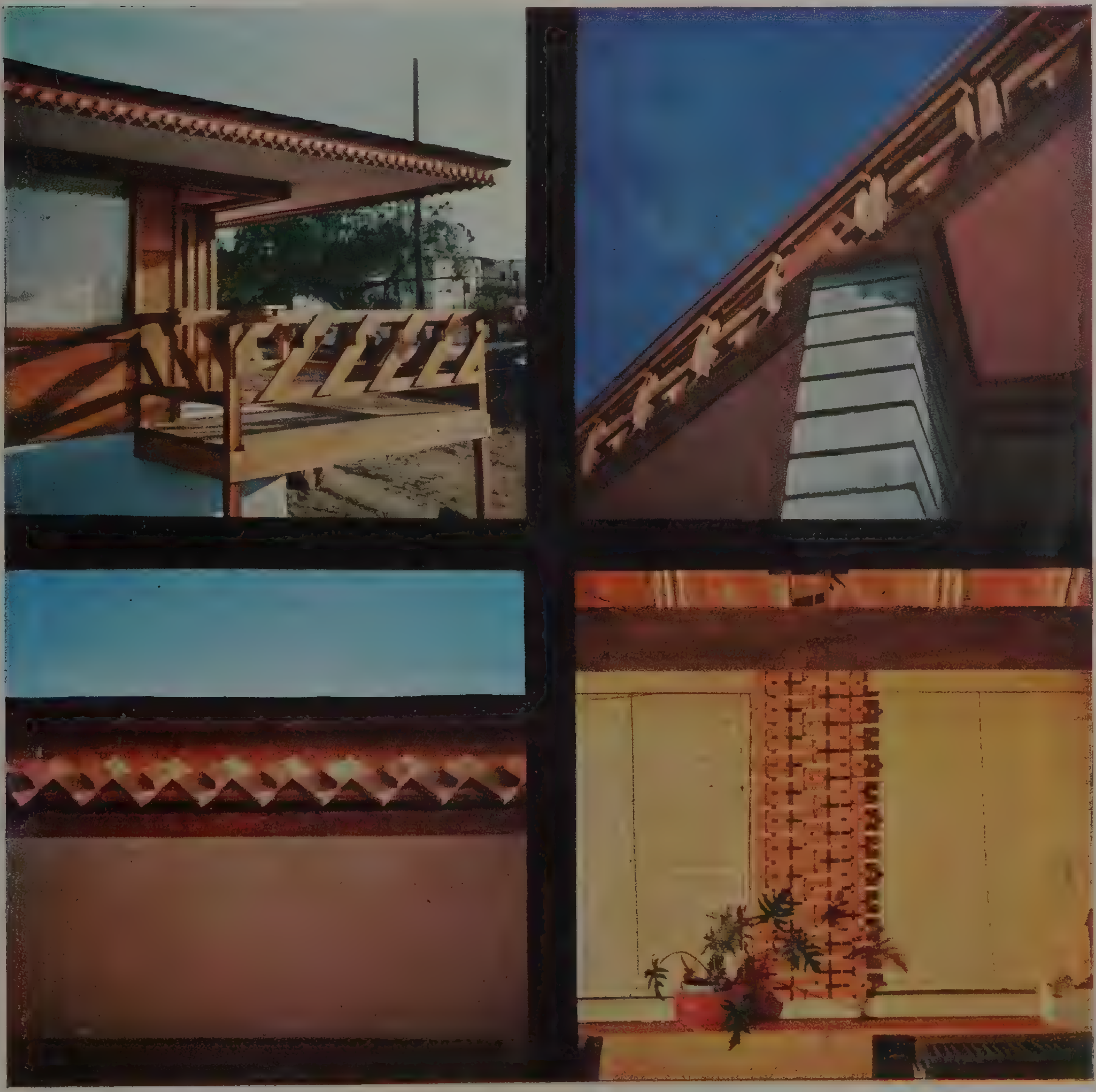
There is a type of ornament that cannot be identified under any one of the foregoing headings. This type I have named "lichenaceous." Unlike natural ornament, which can exist without the structure, lichenaceous ornament can no more exist without the structure than can the lichen without the rock. Lichenaceous ornament takes its place in crustaceous adherence to the structure. Whether it be foliaceous or extremely simple in form, the relationship is an intimate mutualism. It is ornament integrated. Like the thallus (the plant body itself) it may be simple or branched, can vary widely from minute complex forms to large single forms. The cost? In most cases not prohibitive.

There is a great need today in modern architecture for ornamentation that can be produced at low cost. Due to the lack of enrichment of modern architecture, many persons who would otherwise prefer its simplicity and sincerity do not feel comfortable living with the severity of it. But since sincerity does not mean severity and simplicity *need* not mean barrenness, enrichment can be harmoniously incorporated.

Ornament can be as inviting as an open hearth and as warm and friendly.

Lichenaceous ornament gives us a vast storehouse to draw from for the enrichment of our buildings. The possibilities for variation in design are as numerous as the harmonies in music, as unlimited as mathematics. A particularly pleasing point is that this ornament can be designed for efficient machine production and united to the structure by layman as well as by tradesman. In fact, I find that with lichenaceous enrichment, soul and pocketbook can meet. And, as the lichen paints big rocks with its delicate patterns and makes its abode more beautiful while paving the way for other forms of life, just so can lichenaceous ornament enhance the structure to which it adheres.

The scrap pile could actually furnish most of the material called for in John Lloyd Wright's system of "lichenaceous ornament" (ornament that is attached to the structure as a lichen attaches itself to a rock). View 1 shows a "chain" pattern applied to a roof facia—note the harmoniously designed railing;—view 2, a close-up, shows how simply the work is done. View 3 is an elaborate "fret" pattern and view 4 a "panel" pattern used indoors.



What Lies Ahead for Home Building—

Stable volume of 1,000,000 or more new houses a year— more competition, closer profit margins, and a far better product

The biggest new U. S. industry since World War II is not television, nor any of the fabulous new products of the laboratory. It is home building, reborn as an assembly-line industry after many millenniums as a handicraft. In 1950 it grossed nearly $12 billion, as much as the whole textile industry, almost as much as the whole chemical industry or the whole automotive industry.

Its sudden rise did more than any other single factor to confound the prophets of postwar depression. In fact, the new home-building industry played much the same part in the prosperity after World War II as the newly great automotive industry played in the prosperity after World War I. It provided new homes for one out of every seven American families, and whenever a new house was occupied as many as 16 families played musical chairs and moved into nicer homes. All this spelled boom for many other industries, for each move called for new furniture, new appliances, new cars, new stores, new highways, new schools, new churches.

The invention which made this new home-building industry possible is a new financing plan worked out in partnership with government. Under this plan millions of families have been able to buy new homes with little or no down payment at a monthly cost cheaper than rent. Equally important thousands of builders have been able to finance multimillion-dollar housing developments on government-guaranteed advance commitments for mortgages. So well has this plan worked that in six years the total cost to the taxpayers for creating a whole industry has been less than the cost of price support for a single year's crop of potatoes! Home building is thus an outstanding example of government-&-industry co-operation.

Home building is also the decade's outstanding example of free competition among thousands of units.

The steel industry is bigger, but fifteen great corporations make 90% of the steel. The auto industry is bigger, but three great corporations build 87% of the cars. In home building it still takes 10,920 builders to put up 72% of the professionally built houses, 22,430 to put up 83%.

Until now much of the housing the new industry has created has been strictly Model T, and the best builders admit they have hardly scratched the surface of the economies their new mass production should make possible. Manufacturers are just beginning to think in terms of supplying co-ordinated products for industrial assembly instead of materials for handicraft fabrication. Architects are only just beginning to recognize the social responsibility and financial opportunity the new industry combines for them, and builders are only just beginning to realize that better design will repay its cost many times over. Horse-and-buggy building codes still add $1,000 to the cost of too many small houses, and profits still show some of the bonanza margins characteristic of a new boom instead of the close figuring characteristic of an established industry.

But for all that, home building has made more progress than any other major segment of the economy.

Given a few more years of a reasonably stable volume of around 1,000,000 new homes a year, competition should cure most of these faults, force builders to figure closer profit margins, introduce many more construction economies, improve their design, and in general make much the same kind of progress the automotive industry made when competition made its Model T products unsalable.

That stable volume of around 1,000,000 new homes a year now seems reasonably assured by three factors:

1. Nothing less than 1,000,000 new homes a year will keep up with new family formation and replace the 46,000,000 existing homes over an 80-year cycle;

2. The "new type of tenancy" created by low down payments and low monthly charges makes homes as easy to buy as to rent, even in bad times;

3. Government policy is clearly directed to a stable construction volume.

Before the war, home building was notoriously a feast and famine business, subject to more destructive upswings and downswings than almost any other segment of the economy—down swings which justified the saying that "the most important thing to know about home building was when to get out of it."

More stable volume will make home building a much better business to get in and stay in than ever before.

Because it will be a much better business, more people will want to be home builders—and so the one thing more sure than anything else is that from now on home builders will face far tougher competition—competition that will force them to offer better and better homes, greater and greater values.

Thanks to the job the home builders have already done the wartime housing shortage is almost satisfied. Fewer families are doubled up now than at any time since 1930, and the American people are better housed than ever before.

This is a record of which the home builders can well be proud, but in a very literal sense it means they have now built themselves out of their easy market. From now on they must sell their new houses to people already well housed—at least by yesterday's standards.

That is just another way of saying that home builders who expect to share fully in the next decade's 1,000,000-house-a-year market will have to make their houses so much more attractive and so much more livable and so much better value that millions of families will want to move out of the good homes they already have and into better new homes. And while all builders are getting their values up, many of them will also have to get their costs down to a point where they can tap the tremendous market that the private home-building industry has hardly touched so far—the average families which have never before been able to afford a new home.

The industrial revolution comes at long last to home building

The essential fact to know about the home builders is not that they have built nearly six million new homes since the war—some good and some not so good. The essential fact is not the houses they have built, but the industry they have launched—an industry whose potential for better living it would be hard to overestimate.

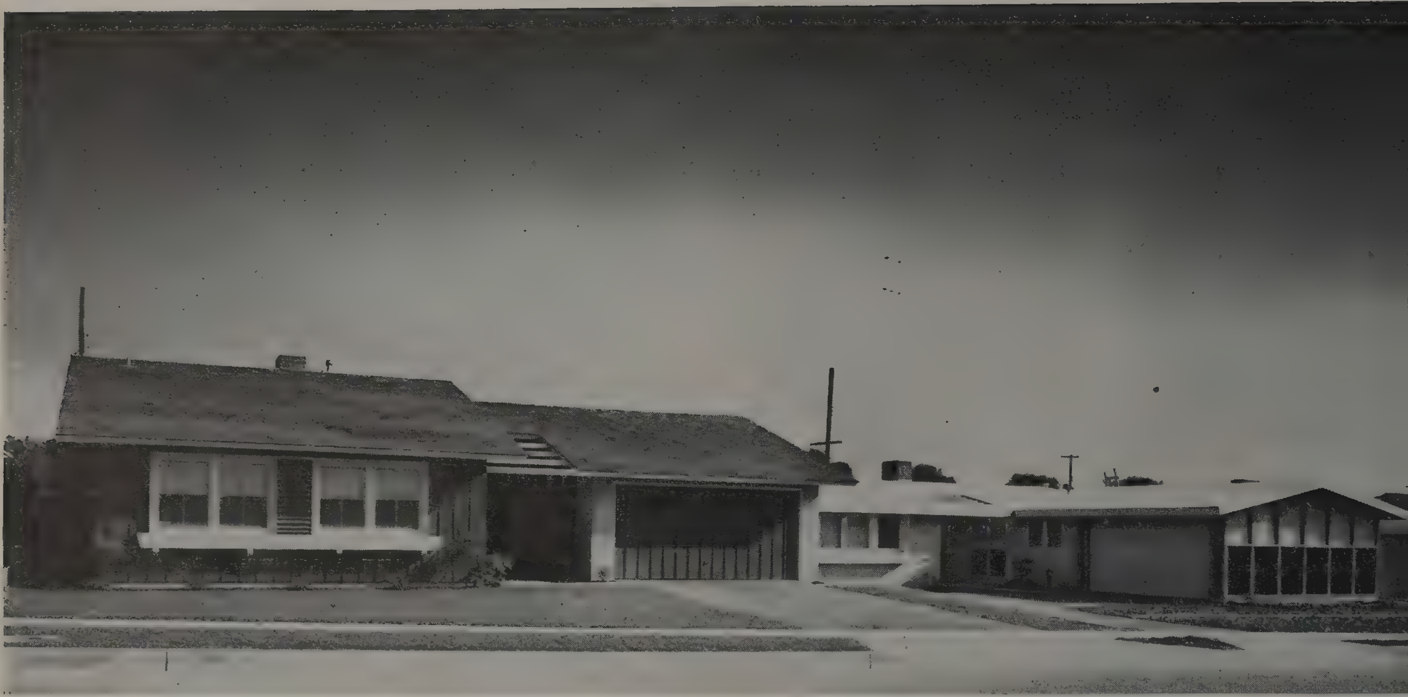
Every rise in the American standard of living since Colonial times has followed some shift from handicraft to industry. Industrializaton has given the average family incomparably better clothing, incomparably better food, incomparably better mass entertainment, incomparably better transportation. It has given every family far more time for leisure and recreation and culture, given every family comforts unknown even to the wealthiest of our forefathers.

The last great element of our economy to enter this vastly stirring industrial revolution is home building. Only in the past six years has home building at long last entered even the first stages of its industrialization. And the important thing to observe about these first years is that already a few builders here and there have shown that volume-built houses *can* be better designed, better built and better suited to today's way of life than most of the houses custom-built at twice the cost (in today's dollars) a generation ago.

The four essentials to the successful industrialization of home building are:

1. The invention of financing and sales methods which will open up a mass market. This step has already been taken.
2. The introduction of production-line methods for final assembly. These have already come into general use among thousands of builders.
3. The development of standard dimensions, so that prefabricated parts may be precut to fit together quickly and economically for final assembly. First steps toward this dimensional standardization are being taken through the increasing use of the 4" module and the establishment of certain larger basic dimensions to which stock parts for almost every part of the house can be pefabricated in a vast variety.
4. The spread of far higher standards of design. On this front too, the path of future home-building progress has been clearly indicated. More builders than ever before are working with architects, and already one volume builder has paid his architect more for the design of a house to sell at $10,000 than the fee an individual client would expect to pay his architect for a $250,000 house.

How fast the pace of industrial progress in home building will accelerate from now on, no man can tell. But as industrialization advances there is no reason to doubt that the volume-built house a generation from now could be as much better than the average custom-built house a generation back as today's Ford is better than the best Brewster-body horseless carriage of 1905.



Photos: (above) Julius Shulman; others George de

IS AN ARCHITECT WORTH HIS FEE?

Banker finds $75 design + $10 color scheme = $1,000 more value

LOCATION: La Habra, Calif.
MAC-BRIGHT CO., Builders
EDWARD H. FICKETT, Architect
WILLIAM MANKER, Color Co-ordinator

Too often, home builders find mortgage lenders unwilling to give full credit for better design and better planning. Here is a successful Los Angeles development for which the lender actually suggested the architect and cheered the result as enthusiastically as the home buyers.

"The architect added at least $1,000 to the salability of these well built houses," says J. Howard Edgerton, president of California Federal Savings & Loan (one of the West's largest). "They are the best buy in their price class in Southern California."

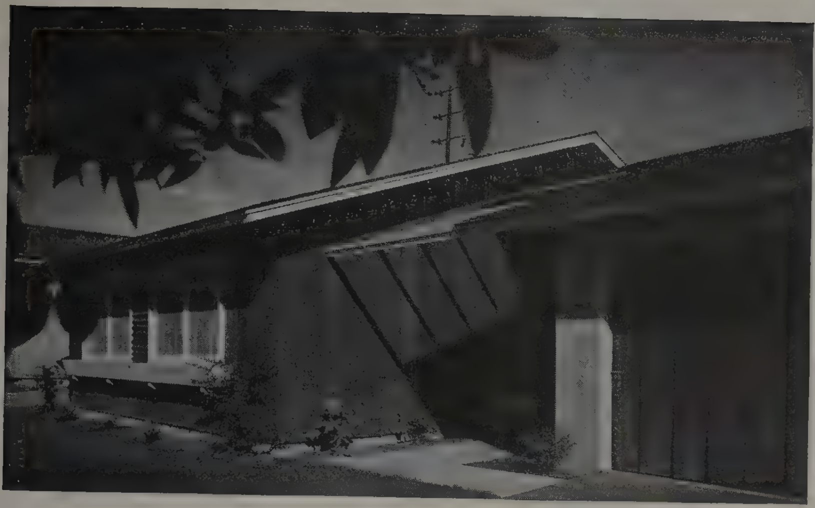
Builders Kenneth Albright and Curtis McFadden, who paid a design royalty of $75 per house, are more than pleased with what Architect Edward Fickett contributed to their 160-unit La Habra project. "How better could we have spent $12,000? Houses in the $13,000 range are plenty hard to sell with down payments up to $4,500. Without the sales appeal the architect developed, what would we have had to sell?"

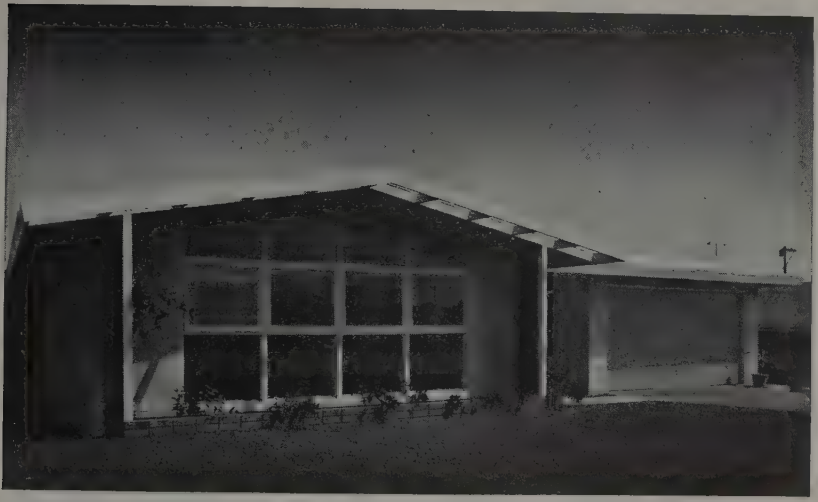
Architect Fickett, who has designed thousands of other builders' houses, is pleased too. "I never had a client quite so willing to go along on using new ways to make houses more livable and more attractive. We compromised with public taste by keeping fairly close to the California ranch house, but almost all the details are contemporary, and we never had to compromise where livability was involved."

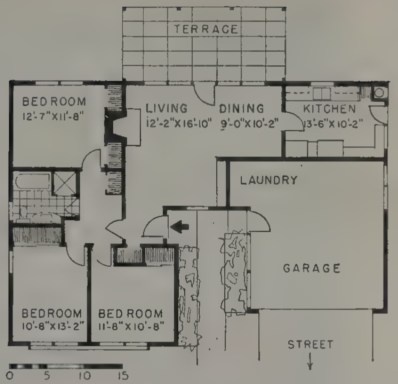
Actually Fickett gave these ranch houses a freshness and design rightness too seldom found in medium priced houses. The development as a whole is given architectural character by such uniform features as the wide (3′) overhangs, the 2 in 12 roof pitch, and the repeated use of the grape stake motif, sometimes vertical, sometimes horizontal. It is given distinction by the good proportion of many details like the occasional glazed gable ends in which the big scale fenestration is matched by the heavy mullions and muntins and the bold cheek walls on either side.

Architect Fickett is a builder's son, understands the builder's problems, talks the builder's language. But he is fired by the importance of giving home buyers something better, and when necessary he is perfectly willing to fight the builder on the builder's own terms for what he believes in. On this project, he did not have to do much fighting, for the builders were almost as interested as he was in getting something better.

Perhaps the most important new idea the architect sold the builders was the importance and low cost of better color. Color specialist William Manker was retained at $10 a house to make an attractive pattern for







Floor Plan A was most popular because kitchen permitted serving meals in back garden.

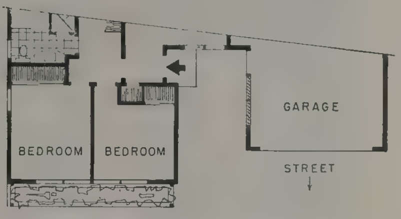
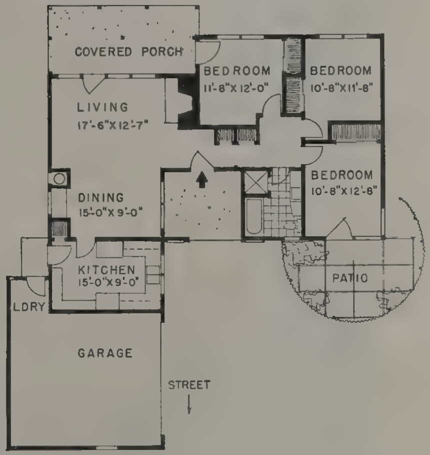
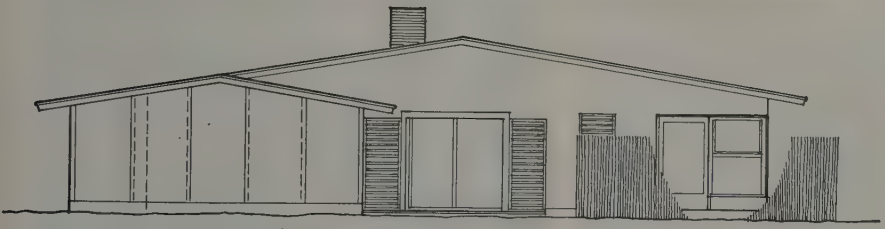


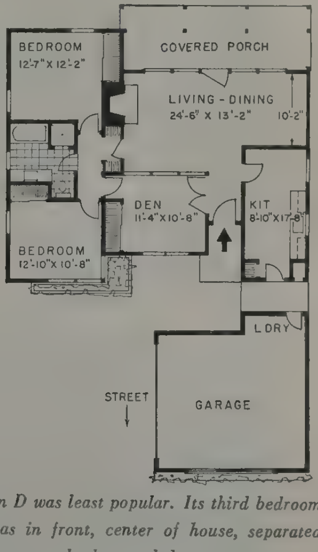
Photo at left is same plan but with floor-to-ceiling bedroom windows which proved very popular.



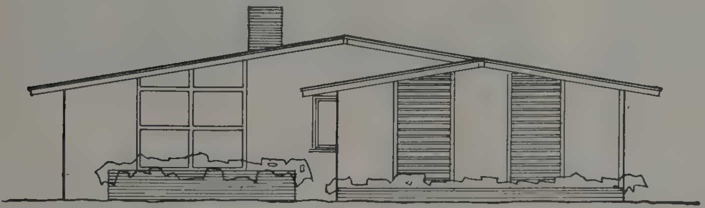
Floor Plan B has one bedroom at front and two at back. It tied in popularity with Plan C (p. 142)



Front elevation of Plan B shows how carefully Architect Fickett worked out details and variations. Fence (cutaway in drawing) at right shields bedroom from street.



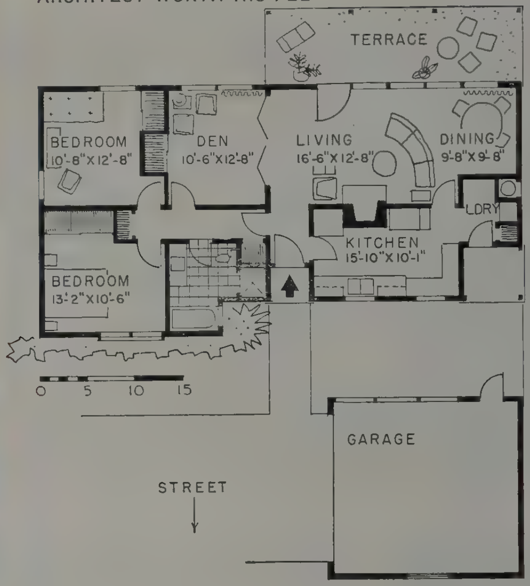
Floor Plan D was least popular. Its third bedroom or den was in front, center of house, separated from living room by louvered doors.



Front elevation of one of the D series. Each plan had several front and rear changes, numerous detail variations.

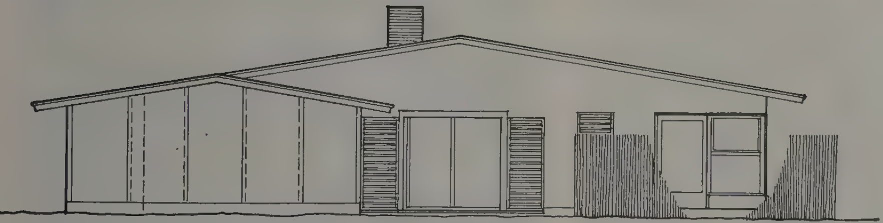
Attractiveness of paved rear terrace is evident here. All terraces had some overhang. Vines had not had time to cover trellis in this early photograph of a model house.

ARCHITECT WORTH HIS FEE



Floor Plan C (plan of house photographed on these two pages) was built with third bedroom or a den next to living room. Kitchen has both an adjoining laundry and porch.

Model house, furnished by Barker Bros., Los Angeles, shows unusual quality of these houses for $13.000. Colors by William Manker were a great sales feature, sliding glass doors to rear terrace popular. In this house, living-dining area is 26' 2" in length. With folding doors to den open (as on opposite page) another 10' 6" is added.



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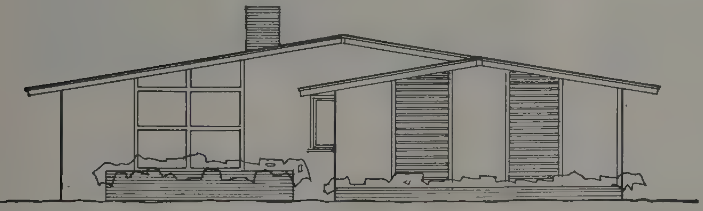

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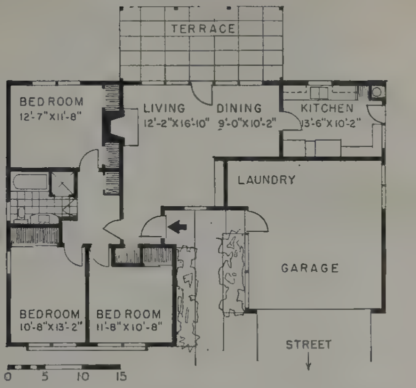

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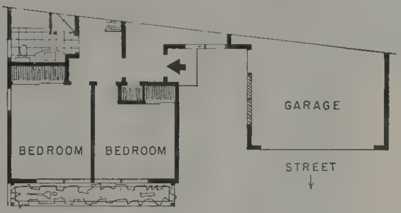

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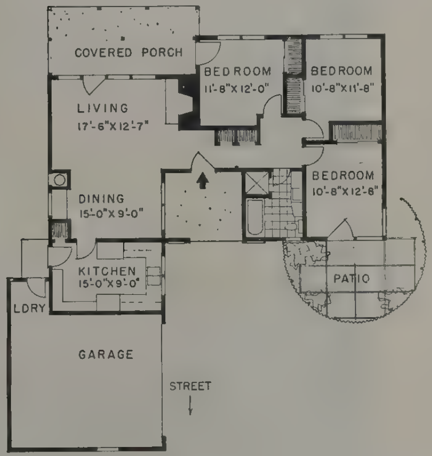

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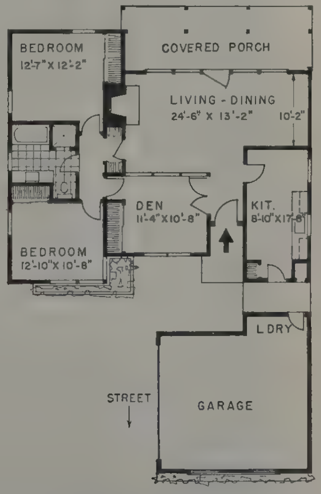

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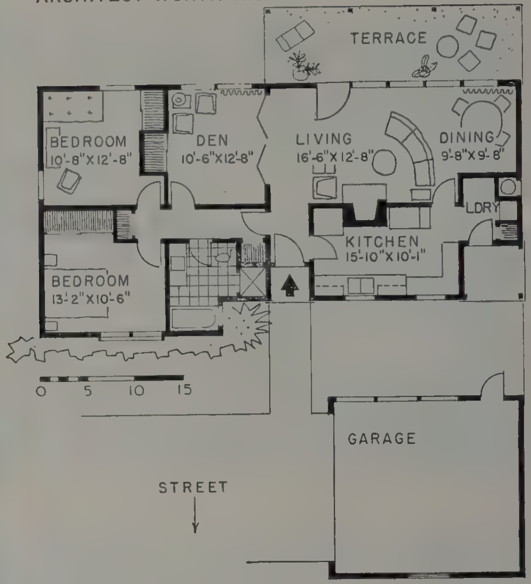

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Fireplace above is one of ten different designs drawn by the architect. This view was taken from dining area.

Grape stakes used on exteriors or in other ways form a motif carried through the neighborhoods. Sixty per cent of the exterior walls is of redwood which was used in many ways to get interesting effects and avoid monotony.

all the houses along the street and to harmonize the colors of various rooms. (For Manker's explanation, see page 145.)

These special colors added about $100 per house to the painting contract, raising it from $350 to $450. The colors made such a hit that the builders have retained Manker for a lower priced, 400-house development too.

Other selling points the architect contributed:

1. All the houses offer possibilities of indoor and outdoor backyard living which were something of an eye opener to prospective home buyers. To that end:

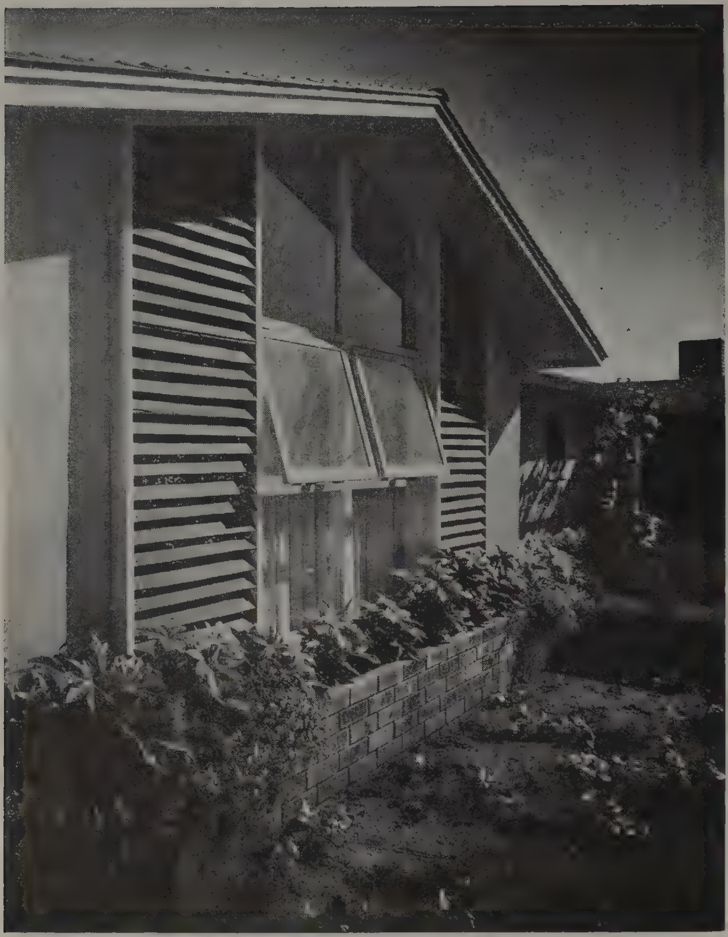
▸ All the houses were given rear living rooms with floor-to-ceiling window walls that really are window walls and can be slid back to open the living area to a large (8'x20') paved patio, which is either trellised or fully roofed.

▸ All houses were sited to avoid cutting down trees in the back yard, so every house has two or more orange and avocado trees in the rear (because of grading, trees in front could not be saved).

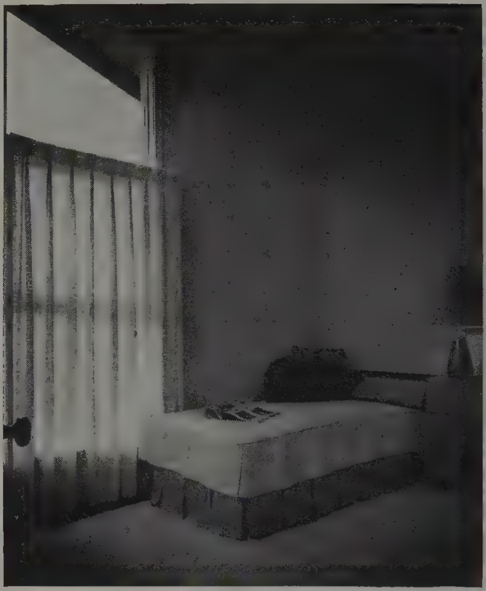
▸ All the back yards are completely surrounded with a $150 redwood fence, with the service yard separately fenced in either at the rear of the yard or near the kitchen. All garages were placed close to the street, partly for convenience and partly to leave the rear yard free for family living.

(Continued on page 144)

View from television room or den (in Plan C only) showing louvered, folding doors to living room.



Grape stakes laid horizontally give an interesting texture. Brick planting boxes, proportion of overhang, well designed windows are characteristic touches.



Always conscious of how the house will look when furnished, Fickett designs so standard-length curtains can be used even with high gabled windows.

Kitchens are nearly 16′ long, have general appearance of those in houses costing twice as much. Built-in dining nooks, double sinks with garbage disposer, automatic dishwasher, ample cabinets are included.

Home buyer got considerable choice

2. Fickett's four basic plans give the home buyer considerable freedom of choice. For example:

- Three plans put the kitchen on the street side, handy to the front door, but the fourth (Plan A, top page 141) puts the kitchen in the rear handy for outdoor dining. To everybody's surprise, the rear kitchen proved the most popular, accounted for 60% of the sales compared with about 15% each for Plans B and C and 10% for Plan D.
- Two plans provide three bedrooms, the other two provide a multipurpose room which can either be used as a third bedroom or thrown wide open to the living area. There are ten different fireplace styles, so any buyer who dislikes the fireplace shown in the picture on page 143 has nine others to choose from. Buyers are also offered several choices for another very popular feature—the paneled wall behind the fireplace which could be of either redwood or cedar.
- In some houses the bedrooms have beamed ceilings following the roof lines and tall windows running up to the gables. In other houses the bedrooms have conventional walls and conventional windows. The tall windows made a hit, but the builders were surprised to find how few buyers commented on the beamed ceilings.

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(Continued on page 144)

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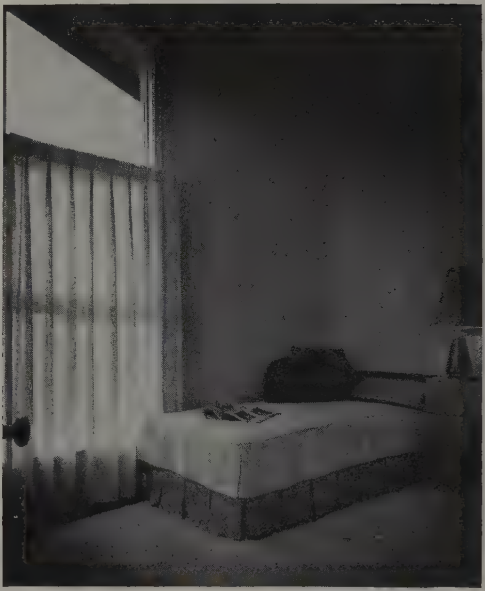

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Kitchens are nearly 16' long, have general appearance of those in houses costing twice as much. Built-in dining nooks, double sinks with garbage disposer, automatic dishwasher, ample cabinets are included.

3. To avoid monotony, many variations in the exterior appearance of the four basic plans were worked out.

- Each of the four basic plans can be reversed. On three, the roof line can be turned. Some houses have red cedar shingle roofs; others have white dolomite built-up roofs.
- Further variety is provided by the choice of five types of siding on the street fronts—tongue-and-groove, board-and-batten, lap boarding, flat paneling and exterior plywood (board-and-batten proved the most popular).

4. All the bathrooms are oversized (8′x8′ instead of the standard 5′x7′), with a stall shower as well as a tub and with a Pullman lavatory 4′ long.

5. Glass louvers, which are only just finding their way to California, were used in all baths and kitchens and also for ventilation in the living rooms.

Quite apart from these selling points developed by the architect, the builders also developed many salable values. For $13,000 the buyers get a 1,152 sq. ft. house plus a 2-car garage on a lot 60′x110′ or larger, plus $100 worth of landscaping. All the rooms are oversized, notably the kitchen, which includes ample cabinets, an electric dishwasher and garbage disposer and a built-in leather-upholstered breakfast nook.

HOW TO COLOR-PLAN A BUILDING DEVELOPMENT

Ideas and techniques behind the color schemes

By William Manker, Color co-ordinator and consultant

The success of over-all, exterior color planning for a builder's development depends on:

1. Giving the tract a "ready-to-live-in-today" appearance. Since full-grown shrubbery is expensive to buy and transplant, color can be counted on to soften the rawness inevitable in all new houses. Color can help sell the house.
2. Giving sufficient color choices so the client will not feel it necessary to repaint immediately in order to have the schemes that he wants.
3. Proper scheduling so that the painter and his staff will not spend valuable time trying to decide just where each color is to be used.
4. Supporting the architecture but not dominating it. Color should unify the plot plan and encourage the owner to landscape and improve his investment.

Exterior colors

Color planning is as important for builders as plot planning, involves careful study of the specific locale, orientation and type of architecture.

The acceptance of standard-color materials (such as stucco, paints, stains and roofing materials) leaves little leeway to create harmony in a housing project. On the contrary, these elements almost invariably add up to inharmonious color schemes, create rows of houses with strong trim and incidental color notes completely out of keeping with wall and roof tones.

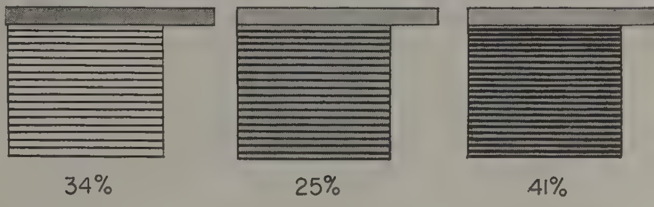
Color emphasis should be on the over-all appearance of the street rather than the individual house. Neighbor relation is as evident colorwise as it is architecturally.

At La Habra Park the general color value of the houses on each street was first established—not too dark or too light. Second, the trim and accent colors were determined and related to the over-all exterior colors. Third, the houses were color-plotted to create a harmonious street view. Also taken into account were the roof materials; shingle roofs predominate, are interspersed with built-up, stone-covered roofs.

The exterior colors were selected from a total of 12 wall colors and eight trim and accent colors.

Exterior wall colors included wood stains and stucco paints.

EXTERIOR COLOR USE PERCENTAGE CHART



LIGHT-MEDIUM	MEDIUM	MEDIUM-DARK
LEMON-YELLOW	TURQUOISE	WARM BROWN
YELLOW-GREEN	CORAL	BLUE GRAY
WARM GRAY	GREEN-YELLOW	GREEN OLIVE
GRAY GREEN		GRAY
		CORAL

ALL COLORS 'GRAYED'

Percentage wise the tract represented 34% in "light-medium" colorations, 25% in "medium" colorations, 41% in "medium dark" colorations. All colors in the above three categories were "grayed" to key them to a common color factor value.

The trim and accent colors were used on facia, eaves, door and window trim, exterior eave "egg crates," posts and beams and principal entrance doors.

Four exterior colors in the "light-medium" values include lemon-yellow, yellow-green, warm gray and gray-green.

Three exterior colors in the "medium" values are coral, turquoise and green-yellow.

Five exterior colors in the "medium-dark" values are used, warm brown, blue-gray, green olive, warm gray and coral.

The street view therefore became a sequence of related grayed colors without a sharp variation between the dark and light houses. The trim color often repeated a wall color established several houses apart and helped tie them together harmoniously.

Interior colors

Seven interior color plans were provided. Seventeen flat colors were selected for walls and ceilings in the living-dining area and the bedrooms.

Interior color schemes were based on room orientation, each having three bedroom color selections based on warm, medium and cool locations. (In general a north bedroom should be warmer in color than other rooms; a west room cooler; east rooms should be warm to medium cool; south rooms medium cool to cool.)

The kitchen and bath colors were planned for each house. Five wall color schemes were used but colors of wall tile, breakfast nook and asphalt tile gave latitude to the five basic colorations. The necessity of ordering the tiles months in advance precluded owners from selection of colors, but the kitchen-bath color setup would go with any of the seven interior schemes the client might wish to select.

Five enamel colors were used for the bath-kitchen setup. Case linings were keyed high in color for accent. The bath and kitchen of a house used the same paint color scheme and the same floor and wall tile in order to expedite labor and material handling.

IS HOUSING INFLATIONARY?

Not necessarily, says Home Building's No. 1 Economist, not even with minimum down payments. In fact, this year too few homes would be more inflationary than too many

By Miles L. Colean

Is housebuilding inflationary? This is a loaded question and it cannot be answered unless we first agree on the answer to another question: What is inflation?

Our definition is this: Inflation is what happens when money loses its purchasing power. If you have any questions about how we came to that definition and what we mean by that definition, it is explained in one easy lesson at top of the opposite page.

What, now, about housebuilding? Is it inflationary? Does it threaten to make money lose its purchasing power?

Since houses are among the most necessary and most durable of goods—since, in other words, they represent real, long-term utility and a means of long-term investment—there is nothing inherently inflationary in their production (as there is in the production of war goods). In fact, so long as home building is financed out of savings, home building cannot have any direct or prolonged inflationary impact, regardless of whose savings are used, regardless of how big the down payment or how big the mortgage.

There are no other kinds of goods about which this may so confidently be said. And yet, we are often told that home building was one of the most inflationary features of the postwar period.

Let's look at the record

During the war housebuilding was sharply curtailed at the very time when the number of people with the money to buy houses was greatly increased. This created one of the conditions for inflation—an excess of money in relation to the supply of goods. The result was immediate. The price of existing houses skyrocketed as purchasers well supplied with money pressed into a market undersupplied with houses.

The same inflation continued after the war, when we began to build again. People rushed to buy the new houses much faster than even the materials to produce them could be made. Home prices, already high because of the inflation in the price of existing houses, rose all over the place.

This price rise should have corrected itself by slowing down buying until supply could get into balance; but this natural correction was prevented by various postwar government actions and policies which increased the swollen supply of money even further and made it still easier for people to use it. These actions included:

1. making it possible and profitable for insurance companies and other lending institutions to get funds for mortgage lending by selling their U. S. government bonds to the commercial and Federal Reserve Banks where, by the processes of central banking, they became new money;
2. keeping interest rates low, thus encouraging people to borrow heavily the money that did not represent actual savings;
3. lowering down payments on FHA and veterans' loans so as greatly to increase the number of people who could bid for the excess money that was available for mortgage loans.

Even though home building increased to ten times its wartime low, it could not keep up with the demand suggested by these policies so prices moved steadily upward.

But it was not housebuilding or housebuilders that caused the almost continuous price rise. It was the combination of a war-created shortage of houses with the government's recklessly easy money policy that did it. Housebuilders did all they could to correct the situation: they broke building record after building record to meet the souped-up demand. If they had not done so, the price rise in houses would have been even greater than it was, so long as demand remained high and the reckless money policy was followed.

What happened in 1951

With a brave show of spirit, the Federal Reserve Board in March of 1951 finally changed its bond buying policy, so that temporarily at least the money-making process was slowed down. The froth was taken off the market, and house buying was restored to its true character of savings investment.

As long as the new FRB policy can be maintained, lending institutions will have to rely primarily on the funds that come to them in the form of savings, and the volume of their loans can be increased only as rapidly as new savings come in. The rate of expansion obviously cannot be as rapid as that made possible by the artificial methods of making money, but once the shock of the change is over, the rate probably would prove satisfactory. And there would be no resulting inflation.

But how will things work out in 1952?

Our present difficulty is that we are again in a war and are getting ready for a still bigger one. Consequently, it is again necessary to pay billions of dollars for goods that have no economic value in the ordinary sense. So far these war goods have pretty well been paid for by taxation, but the outlook is that, before 1952 is out, taxes will not be enough. Then the government will have to go out and borrow—issuing new bonds that will come into direct competition for savings with houses and all the other things that people want to buy or to invest in. The big question will then be: Will the savings be enough to go around? Unless government spending is reduced, they almost

Inflation in one easy lesson

Inflation is what happens when money loses its purchasing power. This may result when either (1) the available supply of money increases faster than the obtainable quantity of goods and of services, or (2) the supply of goods and services declines in comparison with the money in circulation.

Rising prices are not a cause of inflation. They are at most a symptom of inflation that has already taken place. Sometimes rising prices may even prove to be deflationary, for rising prices—unless accompanied by increases in the supply of money—are likely to be self-correcting, either by discouraging buying or by stimulating production.

If the output of new goods keeps up with the growth of the money supply, no inflation is likely. Conversely, if the amount of new money increases no faster than the production of new goods and services, there is no inflation, because the relationship between money and goods will remain constant. This happy situation exists as long as the production of the additional goods is financed out of savings, whether these are the buyer's own savings or the savings of someone from whom the buyer borrows. The reason for this is that when savings are invested directly in goods, there is no artificial increase in the supply of money.

When, however, available savings are insufficient to finance all the production desired and savings have to be supplemented by commercial bank credit—that is, by artificially increasing the supply of money—then inflation is under way.

This is what happened during the war. We had to buy a lot of goods in a hurry to supply the armies of the world. We were unwilling or unable to do this wholly by taxation and the sale of bonds to money savers, so we manufactured money by the various means open to the central banking system.

In the main, it was this process of "monetizing" the debt during and after the war that was mainly responsible for wartime and postwar inflation, but there were other angles.

1. The war goods produced by the manufactured money had no ordinary economic value when they were made. It was just as if so much material and work had been dumped into the ocean. Consequently, there was no chance of an offset between goods and money.
2. The money manufactured by the banking system was left in the economy in an easily usable state, at the same time that the amount of goods people could buy was much reduced.
3. Scarcities or fears of scarcities stepped up the rate of buying and the rate of money turnover; while business firms, in order to keep up with the tempo of demand, borrowed heavily from commercial banks.

The second and third of these actions increased the volume of money in circulation, while the first reduced the supply of goods available for civilian purchase. As a result a terrific inflationary pressure was built up, which overwhelmed the price control system and sent us on our postwar price rise spree.

In brief, inflation, as we have recently experienced it, was the result of an unbalanced increase in the money supply. It was given unusual intensity because the war goods made with the money could not be used by the people who had the money, and because the amount of civilian goods available for purchase was necessarily restricted.

certainly will not. So the government may be faced with the old dilemma of either making more money by an expansion of bank credit or else restricting the buying of normal goods.

Neither alternative is good. If the bonds are taken up by the banking system (instead of by individuals and savings institutions), an immediate inflationary impact will be felt. If goods are restricted, the influence on prices will be the same. And if the two are used together as they were during World War II, the lid will be off.

Priority for housebuilding

Another curtailment of private housebuilding can be seriously inflationary. Demand for houses is still strong—so strong that despite credit controls, material controls, and general confusion, the market has absorbed 1,000,000 new homes in 1951 on top of 1.4 million in 1950. The number of families is still increasing, and full employment makes new families seek houses sooner and older couples hold on to them longer. We are still far short of being replaced. The amount of deteriorated housing accumulated during depression and war.

Any severe restriction now, therefore, will breed trouble for both the present and the future.

Yet it is just such action that bemused prophets are now vigorously urging. Mr. Eric Johnston, the erstwhile economic stabilizer, has demanded that housebuilding be cut to a limit of 450,000 to 500,000 new units during 1952 as an "anti-inflationary" measure. The effect would obviously be just the opposite. It would be about the most unstabilizing move that an economic stabilizer might dream of making.

For the present, it would mean the bidding up of prices and rents of existing houses, with the attendant evils of rent control and danger of further corruption of the credit system. It would cause the disruption of efficient building organizations, with the loss of capacity later to overtake the shortage.

For the future, it could produce again the impatient clamor for houses which followed World War II and made it politically difficult to restore sound financing methods.

What to do

Every effort should be made to prevent a repetition of the policies which forced construction costs up to more than twice their pre-World War II levels. That experience indicates that the first objective should be to control the monetary system—rather than trying first to control everything else.

The resort to bank financing of a federal deficit should be a very last resort. The way to avoid this is to keep the deficits to a minimum by reducing waste in military expenditures and by imposing a Spartan frugality on other government spending, and then to finance what must be borrowed directly from savings rather than from the banking system.

Saving, of course, should be encouraged, and home buying should be recognized as such an important form of saving that it could play an important part in economic stabilization. Money invested in houses is not available for spending on more volatile commodities. Consequently, the stabilizers might well consider giving housebuilding a priority next to defense itself, encouraging as large a volume of new housebuilding as may be financed out of savings (including, of course, the savings of lenders) and limited otherwise only by the amount of materials that can be made available.

The requirements of national security plainly must come before everything else. But it is also well to bear in mind, as the insatiability of the military appetite is more and more demonstrated, that national security means more than arms alone. Since there can be no such thing as absolute security, the several dangers to it and the several means of achieving it must be weighed together. Inflation can be as serious a threat—and is perhaps a more present threat—than invasion. Both must be guarded against, not one to the exclusion of the other.

One important way to guard against inflation is to put real savings into housebuilding. And considering all the risks ahead, we may well begin to ask, not ***is housing inflationary?*** but ***can we afford to run the risk of inflation by unduly restraining housing?***

HOW TO MAKE A GOOD BUY BETTER

Make a house larger, give more and better bathrooms, give better heating, windows, storage, floor plans—all at no more cost

Place & Co. of South Bend, Ind. have just brought out their 1952 models which clearly demonstrate that when a builder is determined to improve his houses he can find ways to do it.

They have given their customers larger rooms, a better heating system, an extra half-bath, better windows, more storage space and greater livability for less money (considering cost increases) than they did before.

What Place & Co. offer:

- A four-bedroom, 1,120 sq. ft. house for $11,400.
- A three-bedroom, 962 sq. ft. house for $10,600.
- A cold-climate house insulated throughout and with an efficient, warm air perimeter heating system in the slab.
- All double glazed windows.
- An extra half-bath made possible at low cost by a cleverly designed plumbing tree.
- Kitchen and utility room 13′x13′ with dining space next to a window.
- Floor plans designed for families with children.
- Well planned storage space and 36 sq. ft. of outside storage, plus storage in an attic reached by a disappearing stairway.
- Lots at least 60′ wide; many are wider. (Garages or carports may be had but they are extras. No kitchen appliances are included.)

Virgil Place and his sons have been building in Indiana for many years. In South Bend the firm's Twyckenham Hills development is a neighborhood of well built homes that are a municipal asset. Place is just finishing the last of 100 houses there ranging from around $16,000 to $26,000, has also built lower cost, two- and three-bedroom houses.

But for its new 183-acre McKinley Terrace project, where there will be some 800 houses in a few years, the firm wanted a better house for the money than it had built before. In addition to Virgil Place, there are two sons, Andy and Bob, and two sons-in-law, Jim Peacock and Henry Amt. Spark-plugged by their father, the boys set out to improve their previous designs.

They knew they could build a three-bedroom house for very little more than their old two-bedroom model had cost, so they ditched the small house completely. As they figured new ways to build a better three-bedroom house, they found they could standardize many items in their three- and four-bedroom models and make each house about 100 sq. ft. larger than their old designs at no extra cost, considering cost increases. With the economies of a simplified plumbing tree, designed by staff engineers William Weist and George Hones, they were able to add a half-bath for only $50 more. They wanted double glazing and found ways to buy and install it for less money than they had been paying for aluminum windows and storm sash. They made other improvements, listed below, which they believe let them sell their houses at from 10% to 20% below the local market.

Why Place & Co. did what they did may be of more significance to other builders than what they did. Their philosophy might be summarized as follows:

House size: Give as much enclosed space as possible. A house 28′x40′ is better than a house 24′x42′ because the former is more nearly square, yet with 112 sq. ft. more has only four more feet of outside wall. Enclosed living space purchased when the house is built is a better buy for the average family than money spent for kitchen equipment or a garage. Such extras can always be added later.

Livability: Family livability, especially for children, is the most important quality in a floor plan. Always provide runway space from back door to kitchen, toilets and bedrooms so children won't have to go through the living rom. If there has to be a choice between a front entrance hall and a "mud" (or utility) room off the kitchen where the kids can leave their boots and play clothes, take the mud room.

Give the kitchen a real dining area. Provide extra-large closets, an outside storage area and a disappearing stairway to storage space in the attic.

In the planning stage measure every room against furniture size to make sure it is satisfactory for furniture arrangements.

Advanced planning: In a highly competitive market, a builder can give extra value only through careful planning. Double

Place's model houses from which 22 sales were made the first weekend and another 18 (with temperature at 15° below zero) the second weekend. Double glazed windows were a great sales feature. First and third houses are three-bedroom, others are four.

glazed windows, for example, can be brought into the $10,000 house only if the framing is engineered to eliminate needless members (see drawing on p. 152). An extra half-bath can be provided only if it can be installed inexpensively through better plumbing design. If a builder has two or more different floor plans, they must be standardized as far as possible. (In Place houses, three- and four-bedroom models have the same kitchens and baths, windows are alike, heating is practically the same, all equipment and details are identical.)

Purchasing: Money can be saved in the purchase of many items such as lumber, insulation and heating ducts by buying less than top-grade quality and upgrading them through careful selection, but never at the cost of performance.

Land policy: Buy good land and give good-sized lots. Larger or wider houses need wider lots. "The cost of raw land is peanuts," says Place, "when compared with the final, retail price of the finished house."

Diversification: In a city the size of South Bend (115,000) a builder can increase the size of his operations by building in several price classes, in several styles and more than one location. The fact that he is known as a builder of quality houses adds stature to his lower cost houses. (Place has an efficient precutting, partial prefabrication operation and sells about 250 houses a year to other builders. A related organization, Bimsco, sells Place houses in a precut packaged form to franchised builder-dealers in an area 200 miles around South Bend.)

Sales techniques: Make a house such a good bargain it will practically sell itself. Give the public what it wants. Staff engineers designed the houses, made their low price possible. (Architects would criticize some of the detailing, such as storage shed line, window treatments, would urge Place to make his houses as fine esthetically as they are efficient.)

What Place & Co. wanted	And what they did about it
More living space at an economical price	By making their house more nearly square, they added 112 sq. ft. to their old 4-bedroom house without adding to the perimeter. They made their 3-bedroom house 98 sq. ft. larger and enlarged the perimeter only 4'. By standardizing dimensions and equipment, their new 4-bedroom house sells for only $800 more than the new 3-bedroom house. The extra 168 sq. ft. cost the buyer $4.76 per sq. ft.
Lower costs	They standardized plumbing and equipment for kitchen and 2 baths of both houses. Heating is practically identical. They buy lower cost lumber, tile ducts and other materials and upgrade them. Everything is engineered for precutting, subassemblies, ease of construction. Entire walls (not just sections) are made flat, raised in one piece.
Double glazing in all windows	They discovered how to buy glass cheaper, then standardized on two sizes. Their engineers devised a cheaper framing method that results in one of the lowest cost installations in the country.
An extra half-bath at a reasonable figure	Place engineers devised a 2-piece plumbing tree that eliminates 7 parts and saves $55 per house, enough to pay for half the cost of the extra bath.
More storage space	In the 4-bedroom house they provided 6 inside closets with 54 sq. ft. of space plus 30 sq. ft. of utility room, an attic which is reached by a disappearing stairway, and 36 sq. ft. of outside storage. The 3-bedroom house has 5 closets.

Photos above show two of the many variations in design and materials in the four-bedroom model. All windows are double glazed. Outdoor storage shed is at rear.

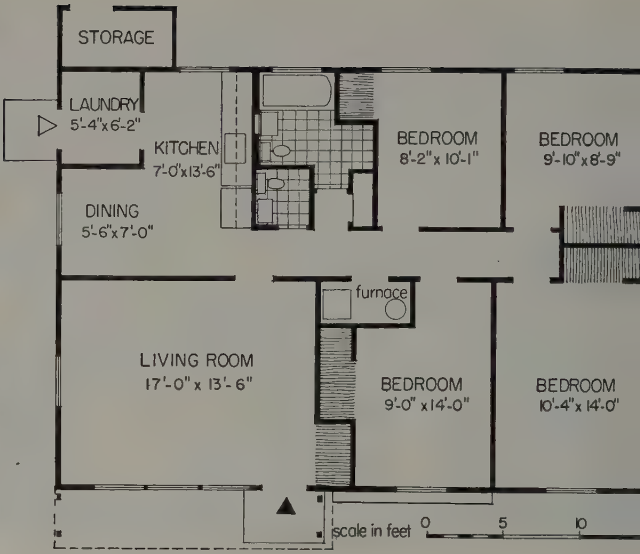
Insurance firm wanted all "deluxe" models

Originally Place & Co. had planned two versions of both the three-bedroom and four-bedroom house. The standard model was to be the same size as the deluxe, but would not have the extra half-bath, double sink, as many linear feet of kitchen cabinets, as expensive kitchen counters, and a number of other items that mounted up to $450 for the smaller house and $500 for the larger one. About half the houses were planned for FHA and half for VA financing.

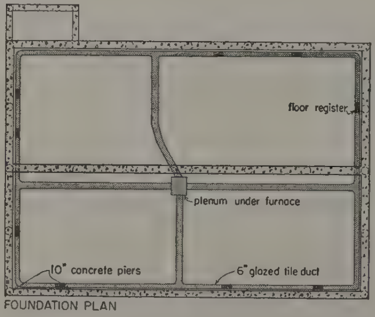
However, when the Prudential Insurance Co. became interested in the project it suggested that the houses would be better if no standard models were built, and that the extra half-bath and other improvements be included in all houses. This was done.

In a sense, Place's "special deluxe" models are now the ones with carport, porch and related storage area. Since about half of all the first buyers wanted this $1,300 extra it is apparent that the carport will continue to be a popular extra. The carport is so designed that it can be enclosed as a garage.

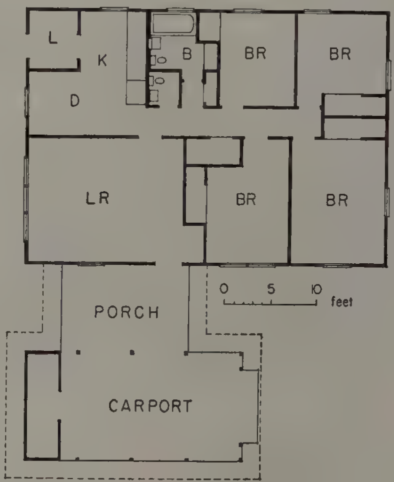
A peculiarity of the South Bend building code makes attached garages expensive to build. Outside the studs there must be plywood sheathing and then conventional siding. Inside the studs there must be ¾" of tongue-and-groove sheathing and on the inside of that, plaster or plasterboard.

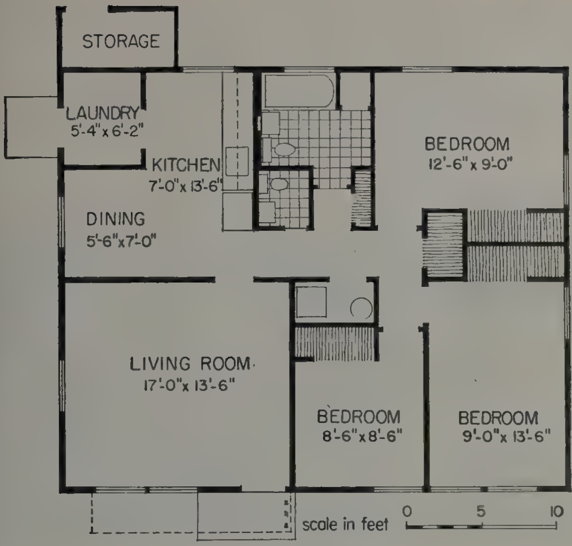


Four bedroom house has livable plan. Kitchen has large dining area, can be shut off from living room with a sliding door. A popular feature is the combination laundry and "mud" room where children can leave their boots and outdoor clothes. Children coming in from outdoors can use either bathroom or their bedrooms without passing through living room.



Heating system, above, uses 6" feeders and 8" perimeter glazed tile ducts. Below: Half the early buyers paid $1,300 extra for carport and porch, which turns living room to rear.



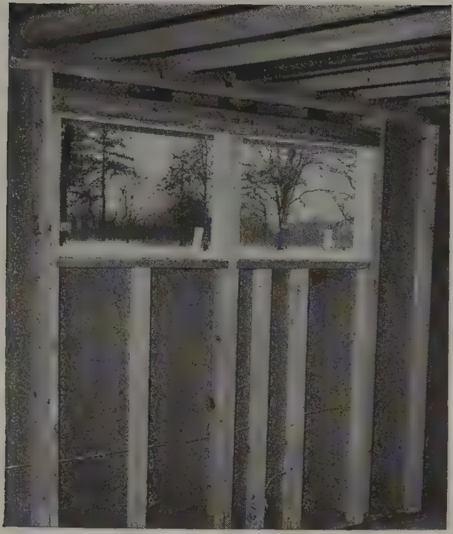


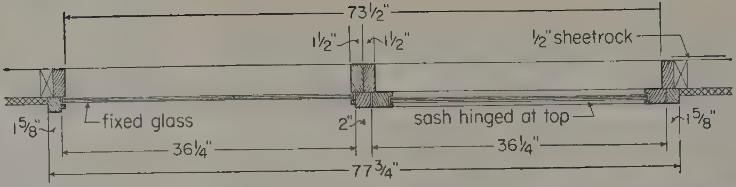
Place got his prices down by standardizing three- and four-bedroom models. Kitchens and two baths are identical. Living room and heater room are in same position. Window glass is of only two sizes and all windows that open are made alike. New 1952 houses were made approximately 100 sq. ft. larger than earlier models at almost no extra cost.

Houses above are three-bedroom models with 952 sq. ft. plus outside storage selling for $10,600. They added 98 sq. ft. to old three-bedroom house. By making new plan more nearly square, they added only 4' to perimeter.

A portion of earlier development, Twyckenham Hills, where 350 houses are now built, with room for 150 more. Houses are two-, three- and four-bedroom models ranging up to $26,000 or more. Rolling land, curved streets add value.

This house was built two years ago in Place's other South Bend project, Twyckenham Hills, a small section of which is seen at left. House sold at $14,400 and is characteristic of higher priced houses in that development which sell for up to $26,000. Front room at left was originally planned as a garage, was converted to a studio room when house was under construction. Many lots here run 90' to 100' wide.





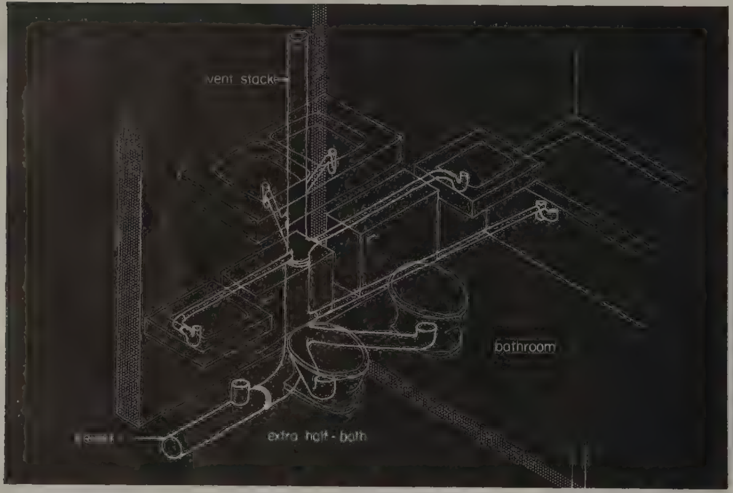
Secret of low cost double glazing was due to smart purchasing and to cleverly designed windows that serve as structural members.

Place & Co. have tried several kinds of heating ducts, find glazed 6" sewer tile is best and cheapest. Three-bedroom house has 65,000 Btu counter-flow furnace; four-bedroom: 85,000.

THUMBNAIL SKETCH OF OPERATIONS

Windows: Virgil Place began by shopping around for double glass until he got a price that made it economical. Then he standardized on two sizes: 24"x36" and 20"x32". The firm's engineers designed windows that were structural, load-bearing members that could be built in the shop and that used less lumber than conventional windows. They got the lumber cheap by buying No. 2 or better Ponderosa pine for $100 per thousand and upgrading it in their shop, choosing clear sections for areas that would show and getting the equivalent of lumber that would cost $250 or $275 per thousand.

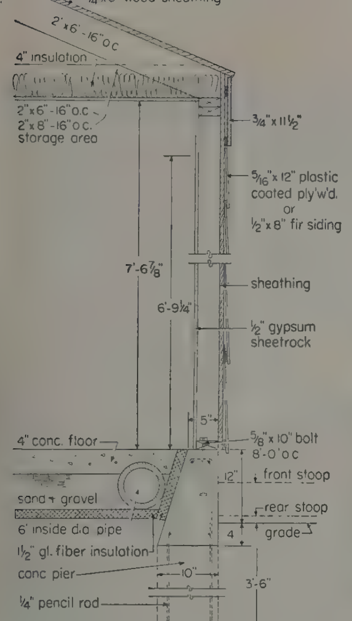
Costs on a two-glass window of which the upper pane hinges out are: glass, $12; sash, $4.50; screen, $2; weatherstripping, 60¢; hardware, $1.50; lumber and labor, $5.40. At $26 they saved $2 on an aluminum window with screen and storm sash. Their nine-pane window (62 sq. ft.) costs them $122 installed. They make windows in from one to nine panes. All headers are the same, made from two 2x4's.



One of the smartest gadgets in Place's houses is the simplified plumbing tree which eliminates seven parts. Without reventing, it serves two sinks and garbage disposer, two toilets, two washbasins, a bathtub and a floor drain. Patterns for the castings cost $500 but can be used about 500 times. Each casting costs $11 but together they save about $55 per house. This tree made it possible to add an extra half-bath at a total cost of only $50.

Plumbing: A study of the two floor plans shows that kitchens and two baths for the three-bedroom house are exactly the same as for the four-bedroom. Engineers Weist and Hones designed a two-piece plumbing tree that takes the place of nine sections. Without reventing, it handles the waste from a double sink and a garbage grinder, two toilets, two washbasins, one bathtub and a floor drain. Pattern for the castings cost $500 and should last for around 500 times. The two castings cost $11 each. They save installation time and some 28 lbs. of lead. Andy Place figures this simplified tree saves $55 per house. That is just over half of what it costs to turn a closet into lavatory with a toilet and a washbasin.

Giving credit where credit is due, Place says he was encouraged to add the half-bath by the FHA in Indianapolis where officials



WALL SECTION

Many builders fabricate their framing and put siding on while frame is horizontal, but few tip up the entire wall of one side at a time. Everything possible is precut at Place's shop. Drawing at left shows construction details.

This homemade machine speeds up the process of applying cement to tape for taping plasterboard. It is on coasters, can be moved from room to room. It may be superseded by a hand-held dispenser originated by Hutchinson & Carey in Denver, if the new type proves to be faster.

persuaded him, with his own figures, that he could install it at a small additional cost.

Heating: Both models are heated by a warm air perimeter system from 65,000 or 85,000 Btu counterflow furnaces in the center of the house. Four 8″ glazed tile feeder ducts carry air to a 6″ perimeter tile duct. The three-bedroom house has 11 floor registers and the four-bedroom house 12. Place has used this system for three years, says people like it better than radiant warm water heat which costs at least $300 more. Perimeter ducts used to be 8″ but with FHA and other technical experts' approval they were reduced to 6″ and work just as well. The firm saves about half the cost of top-grade tile ducts by getting seconds with slight imperfections. A few are thrown away, but most can be used with no lowering of quality.

Construction methods: Production will be at the rate of six houses a week when weather permits. As late as the middle of last month, 54-man concrete crews were pouring slabs at a rate of five a day to get ahead of the winter freeze. Place & Co. own earth moving equipment, buy ready-mixed concrete. They have a full union operation, subcontract only their asphalt tile, gutter, downspouts and electrical work. In addition to conventional bulldozers, scrapers, shovels and trucks they make a practice of buying Navy surplus "bomb buggies" which they use for hauling lumber, to carry portable generators, and for other trailer purposes.

Few critical materials used: "We consider these real war houses," says Virgil Place, "since they require almost no metal, few critical materials. We use cast-iron plumbing trees, back-to-back plumbing, no galvanized ducts in our heating system—only a small boot of sheetmetal for our return air. There are only 10′ of 1½″ galvanized pipe in the whole house. Our hardware is at a minimum. We use wood kitchen cabinets, wood windows. We still include two lbs. of aluminum per house for flashings. We are way *under* the government requirements."

All lumber is precut in the shop. Plans are engineered so it is almost impossible for construction crews to make mistakes. Place & Co. tried and abandoned a layout method that used a marked steel tape and now have layout jigs that speed framing, which is done flat on the slab. Sheathing and siding are also put on while the frame is horizontal; then the whole side of a house is raised at once.

On exteriors they use cedar shingles, cedar siding both horizontal and vertical, striated plywood, flat plywood and plastic coated plywood. A great deal of clear red is used which they buy for only $65 per thousand because it has slight imperfections on one side where a plane skipped or where the grain is torn. That side is turned in and the rough facing turned out with shingle stain on it. People like it and it saves $120 a house. Roofs are sheathed with plywood and covered with asphalt shingles.

Wage rates in South Bend: carpenters, $2.42; painters, $2.30; plumbers, sheetmetal men and electricians, $2.55; cement finishers, $2.42; bricklayers, $3.50; common laborers, $1.81.

Sales methods: Son-in-law Jim Peacock and Paul Hays run the sales department and report constantly on what people want. The new houses are geared so closely with buyers' requests that the firm is not worried about sales.

Virgil Place has said: "What we think, or what an architect thinks, doesn't amount to a hoot until you get right down to who is going to buy the house. The buyer is going to dictate and tell us what to do, and we are going to jump through their hoop". In the past at least 75% of sales was made while houses were under construction.

Peacock says people in South Bend in this price class want more closets, more storage space outside for bicycles, more space to eat in the kitchen, a front living room, a kitchen at the back and a floor plan that keeps children out of the living room as they go from back door to bathroom or bedroom. He says people can quickly tell a good floor plan from a poor one, that more women are conscious of what makes a good, livable house than ever before. Their customers prefer hip roofs to gable, like a slab better than a colonial front door, prefer a kitchen at the back of the house, and prefer redwood siding or wood shingles to asbestos shingles.

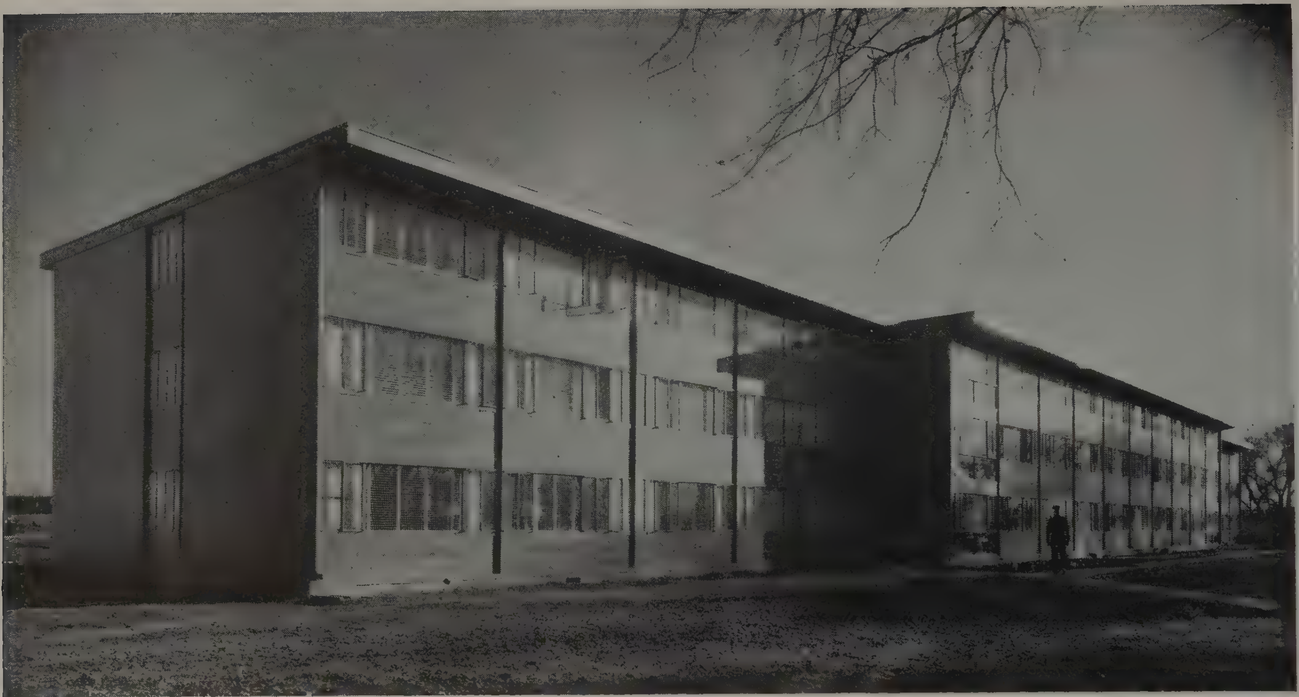
Before the new houses were opened to the public last month, the four model houses had been surrounded with a 6′ fence. This aroused a great deal of curiosity. Some 100 families paid $100 down in the first four weeks and got a printed option that looked like gold mining stock with a number on it entitling them to a house on a "first come, first served" basis. They had not seen houses or floor plans. The option money was put in the bank in their name but they had the satisfaction of telling their friends they had "bought a house."

On the opening weekend, 22 families made the additional down payment, signed up for houses. "The response was wonderful!" says Andy. "We've never seen such enthusiasm for new houses. Sales are going to be OK."

COST BREAKDOWN

(for 3-bedroom, $10,600 house)

Foundations and slab	$ 475
Lumber, doors, cabinets, millwork	1,800
Labor (all except painters)	1,750
Hardware	100
Plumbing	850
Heating	350
Wiring	210
Floors (asphalt tile and labor)	140
All painting	390
Grading and seeding	105
Lot and improvements	1,890
General administration, overhead, selling costs and miscl.	1,750
Profit	889



Murray Studio

AIRMEN'S DORMITORY of prefab steel parts goes up fast, provides more privacy and comfort than old barracks for less money

GI's "never had it so good." For Air Force enlisted men at Offutt Field, Omaha, the new dream-dormitory meant better living than the old open-bay barracks.

Life: Bourke-White

General Curtis LeMay

For the Air Force, it meant new lessons learned in efficient planning, convenience. Although steel framing and skin will be replaced in future barracks by masonry and wood designs "to save critical materials and for economy," it resulted in three things: 1) some of its new features will be incorporated in future GI barracks; 2) the Air Force now intends to encourage contractors' proposals for "non-conventional" methods and materials. And, most important, 3) it might give civilian planners ideas for low cost garden apartments or college dormitories at such future time as steel is again in ample supply.

When General Curtis LeMay moved his Strategic Air Command to Offutt AF Base, he was faced with an acute manpower problem: His highly trained technicians weren't re-enlisting. Paywise, he could not compete with civilian employers, but he felt certain he could improve on Air Force housing to help keep down personnel turnover. When an old cavalry barracks burned down, he asked his ranking bachelor sergeants for suggestions, cut through red tape with characteristic drive and presented SAC sketches to headquarters that resulted in the building pictured here.

The steel-framed, three-story 37′ x 282′ dorm was erected with standard insulated steel curtain-wall panels, standard room-width (14′) steel sash windows and standard steel panel floors topped with 2″ of concrete and asphalt tile.

Advantages claimed to the Air Force and the taxpayer:

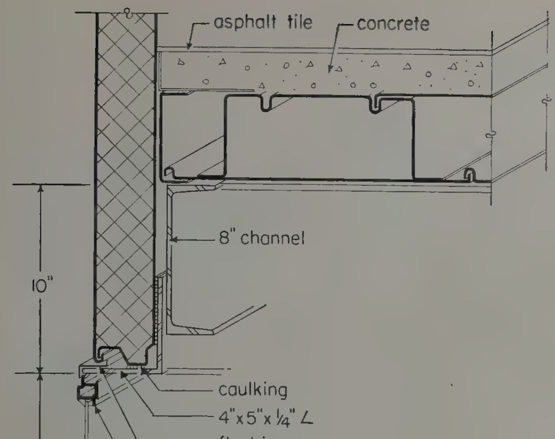
Less erection time: 180 days, including 37 lost to wet weather during the foundation stage. Posts, girders, floor and wall panels, window sash all are prefabricated. Floor panels become a working surface as soon as they are laid, reducing scaffolding.

Less labor: with slab-on-ground, only 1,100 cu. yds. were excavated—for a perimeter trench and small boiler room for the steam heating system.

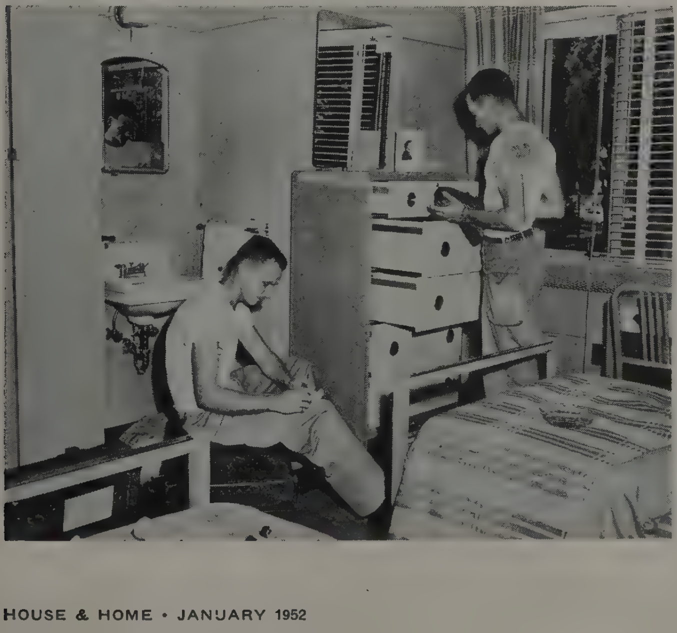
Less maintenance: steel ceilings and walls are prime-coated at the factory, need only a coat of paint to finish them. Like the asbestos-board interior partitions, they can be washed with soap and water.

Less danger: all materials used in the building are non-combustible.

Less money: the total contract price, including engineering, site improvements, utilities and furnishings for the 216-man dorm amounted to $325,824—or $1,508 per man housed, which compares favorably with conventional barracks of wood or masonry. (One of the Air Force's latest contract awards for 17 wood barracks figures out to $1,867 per man.)

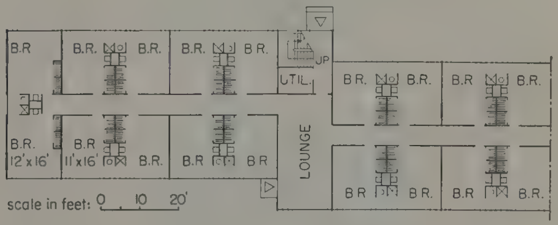


Typical exterior wall section (above) shows steel "sandwich" panels and cellular floors. Below, GI's enjoy new advantages: only two men per room, a closet apiece, twin beds instead of double-deckers, lavatory, adjoining outside bath, drawers, desks, lamps and Venetian blinds.



Two men set panels in place from simple scaffold. Steel can be laid up in most weather; closing-in time is lessened by prefabrication of all covering members: walls, roof, windows.

The 16" x 3" x 14' panels are filled with glass fiber insulation, transmit as little heat and sound as 13" masonry. Like interior partitions of 1¾" asbestos board, they are movable and salvageable for changes, additions.



Half of first floor plan shows two-man rooms separated by closets, lavatories and bathrooms. All three floors of the 37' x 282' dormitory are identical, with two stairwells, two 23' x 14' lounges and 5' wide halls.

WOMAN BUILDER TURNS OUT A COMPLETE "NUCLEUS" HOUSE FOR $5,880

Dorothy Shahan's 912 sq. ft. house in Phoenix is the country's top Title I buy, and a bargain in what women like

LOCATION: Phoenix, Ariz.
FRANK R. FAZIO, Architect
FARMER & GODFREY CONSTRUCTION CO., Builders
DOROTHY SHAHAN, Developer

"In FHA's opinion, this house is one of the four or five best values in the low cost field, and just about the best designed. It is the biggest Title I buy we've seen."

So says Herbert C. Redman, Assistant Commissioner of FHA in charge of field offices, of this 912 sq. ft. house in Phoenix.

Every builder gets some of his best ideas from his wife. She knows what women like—and usually it's the woman who chooses the home.

No doubt this woman's angle is one reason why Mrs. Dorothy Shahan, one of the two woman directors of NAHB, has been able to produce so much house for so little money. At $5,880 ($1,130 down, $29 per month under Title I FHA financing), it is a real bargain in what women like:

- This "nucleus" house lends itself to additions to keep up with growing family needs, with the result that 75 houses originally built like peas in a pod are already being expanded and changed by their owners.
- To further avoid any row house monotony, the plan can be turned in any of three directions, and there are nine different exterior elevations.
- Wider, deeper-than-average lots (see page 160) make possible the above variations in both expansion and siting.
- It is packed with "extras" not required under Title I, such as interior plastering and painting, closet doors, picture windows; it is even planned so that a simple cooling system can be installed at a cost to the owner of only $126.
- Extremely generous rooms include a party-sized living room (15′ x 20′ plus an 8′ dining L).
- A pass-through links kitchen and living areas.
- There are good schools and bus pickup at each house. (Location is away from the industrial section, nine miles east of Phoenix and near the Scottsdale winter resort area.)

When Mrs. Shahan made up her mind to convert her own 80-acre ranch into a crop of good low cost houses, she drew on personal experience: she had raised three children, studied and drawn countless house plans, supervised the building of two houses for her own family. She had also been in the real estate business for four years, and taken a strong and womanly interest in "the 60% of my clients who needed a house I couldn't find for them—a good small house they could pay for and still have money for real furniture instead of made-over packing boxes." She felt she knew what these young couples wanted, and planned her Park McDowell subdivision with them in mind.

"I wanted to build the most house for the least money. I wasn't an architect or a builder, but I was sure it could be done, and that the ranch I'd lived on for 21 years was the place to do it. I was so sure—and so determined—that I didn't give up when nearly everyone discouraged me. I simply decided to roll up my sleeves and see what I could prove."

That it can be done is exactly what Mrs. Dorothy Shahan and her architect, Frank Fazio, have proved.

First step was a park land plan with curving roads and lots varying from 65′ to 85′ in width and from 112′ to 140′ in depth, averaging about 75′ x 125′. These were first measured out by Mrs. Shahan's 26-year-old son with the aid of a 6″ rule, finally checked and approved by a leading land engineering firm.

Next she arranged for utilities, her greatest original outlay being for a mile-long 8″ pipe to the end of the city's master line. (Later, the city water department paid her back.) Road paving and curbing were not required nor, under Title I, were trees. However, with a typically feminine attitude, Mrs. Shahan decided trees were important, and put in what few she could afford.

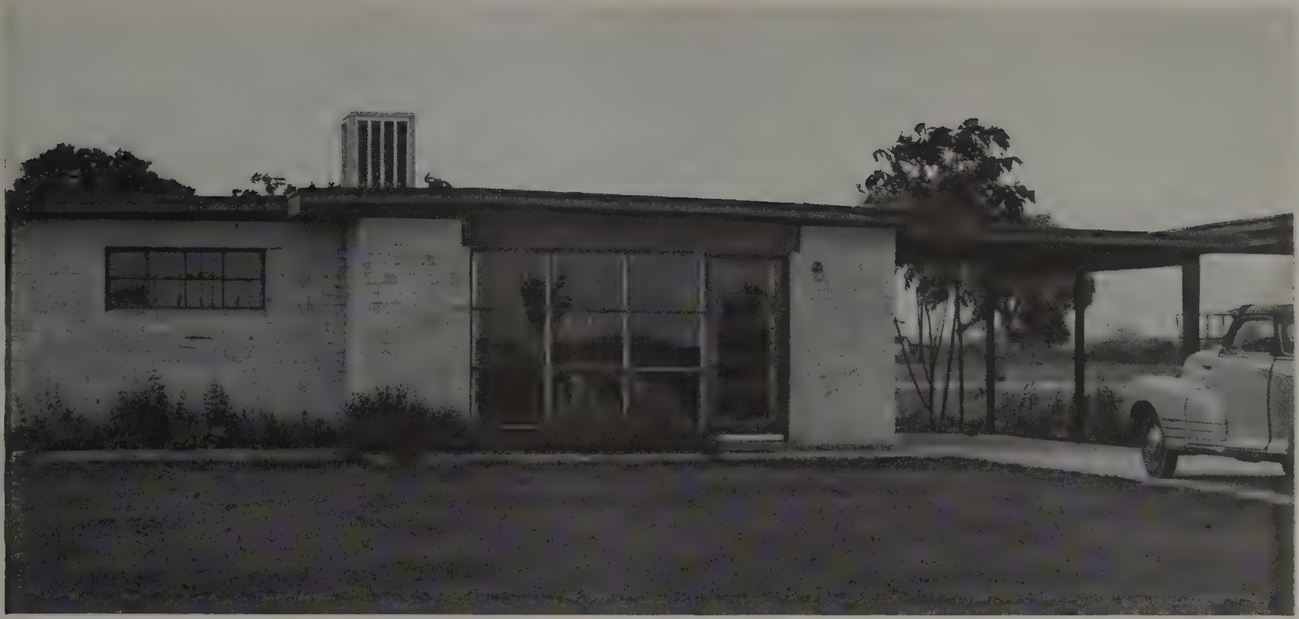
Then came the long, hard, disappointing search for the kind of house plans she wanted. There seemed to be none in existence, and no one who could produce them. But, says Mrs. Shahan, "I didn't see why it couldn't be done—that simple house with space used for big rooms, and set up so each owner could add on, modify, tinker until there would be no row-on-row sameness, but each house suited to the owner's way of living."

It was because she "couldn't see why" that Mrs. Shahan persisted and kept on searching until finally she found local architect Frank Fazio. To him, her requirements were a challenge and an opportunity.

Fazio had been working on the design for an economy house, and was convinced that "low cost houses should not be just a squeezed-down version of more expensive houses." He believed in "planning instead of skimping." He had the architectural and engineering know-how, the ability and desire to design a good house that could be built at minimum cost.

The design and construction ideas went hand in hand, each making the other possible and proving again that the place to cut corners is on the drawing board.

- *Construction planning:* There is only one interior bearing wall, of frame studding, right down the center of the house. On one side of it the two bedrooms were built as one big room; likewise, on the other side, the kitchen and living-dining room were built as one. This meant, for example, that instead of dismantling their scaffolding to move from one bedroom to another, the plasterers had simply one large room to work in. The shell could be completely finished first, and prefabbed wardrobes and closets later shoved in as room partitions.



Photos: Joey Starr

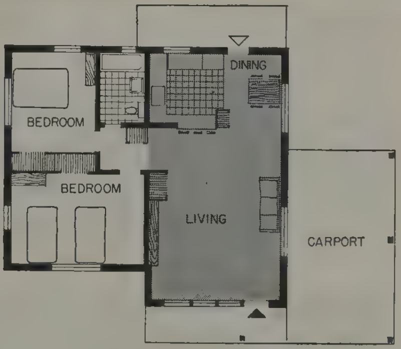
Neat exterior has picture window-front door grouping, carport (extra) to add to apparent width. House may be turned any of three ways (below).

▸ *Building method:* The building was so planned that the different crews could work quite independently of each other. Each crew came in and did its job as fast as possible, moved smoothly from house to house until all were completed, never had to come back. First the plumbers went in and put up the plumbing trees for all 75 houses; then the concrete workers poured footings, stems and floor slabs all in one operation instead of the usual three; the masons built the walls; the carpenters put in the bearing walls and the roof framing, etc. Lumber was precut and delivered in one-house packages.

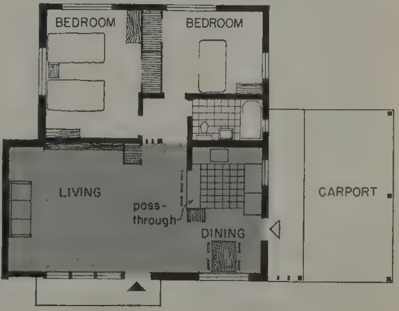
▸ *Economical materials:* Exterior walls are 4″ x 8″ x 16″ pumice blocks, unpainted. (The 8′ ceiling height was determined by the fact that the masonry blocks added up to 8′; the steel window frames fitted the same module.) Doors are gumwood slab. Floors in kitchen and bath are asphalt tile; colored concrete elsewhere. Heating is by gas furnace in the living room wall.

▸ *Roof structure:* The roof framing is one of the best construction features. With the single interior bearing wall bisecting the house, the roof is supported by long (18′) joists which span the entire 16′ width of either half and run on to provide a 2′ overhang. Stock pieces of lumber 2″ x 14″ x 18′ long were cut on a diagonal lengthwise and placed high end to high end, 16″ o.c. These are 9½″ high at the center and 4½″ high at the outer ends, thus providing a slight pitch for drainage.

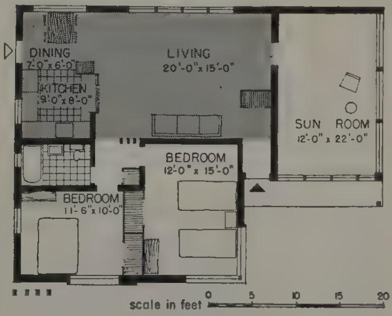
▸ *Expandability:* To demonstrate what can be done with the basic plan, Mrs. Shahan is now living in a model she has dubbed "Little by Little." She has already converted the garage into a 12′ x 22′ studio-sunroom at a cost of only $788, is now building a patio and terrace off the living room, which faces toward the back. (The nearly flat roofs also help make these houses suitable for additions.)



Basic floor plan, showing the living area at side (see picture above).



Variation, with living area across front, direct access from carport.



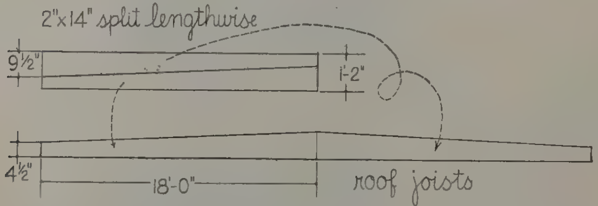
Same plan, with the living area in back, carport converted into sunroom.

Prefabbed bookcase is an extra, may be placed on wall adjoining bedroom or carport (see plans). Living room is 15' x 20'—big enough for both furniture and navigation.

View of living room looking toward dining area shows the kitchen pass-through, an idea that appeals to every woman who does her own work and entertains without a maid.

▶ *Cooling system:* At an extra cost of $126 to $136 (depending on Btu's preferred), owners may have a cooling system installed. This is an evaporative cooler on the roof which blows cool air through a plenum chamber in the hall and on into vents in every room. (Sheet metal duct in plenum chamber is included in house cost.)

▶ *Special features these houses have:* Although Title I requires only that the "shell" be structurally complete, these houses offer also a plaster job, interior painting, closet doors, ceilings insulated with aluminum foil or 4" rock wool, picture windows, copper screens, more lighting (four plugs in living room, two in each bedroom plus cove lighting over the wardrobes, two in kitchen, one in bath). And, most important, floor space: most houses in this price class are only about 800 sq. ft. (Average Title I house built in 1950 had an estimated value of $5,069, and average floor area of 638 sq. ft.)



Roof framing is of stock pieces of lumber 2" x 14" x 18' long, cut on a diagonal lengthwise and placed high end to high end, 16" o.c. Pitch is 5", from 9½" at center to 4½" at outer ends.

▶ *What is not included:* Carports are extra ($300); also the prefabbed bookcase shown in living room pictures. There are no sidewalks, and roads are not paved or curbed. (Roads are 28' wide and do have an "all weather" driving surface, a 4" topping of decomposed granite rolled in.) Planting is not included. There is no weather stripping, flashing or slab waterproofing.

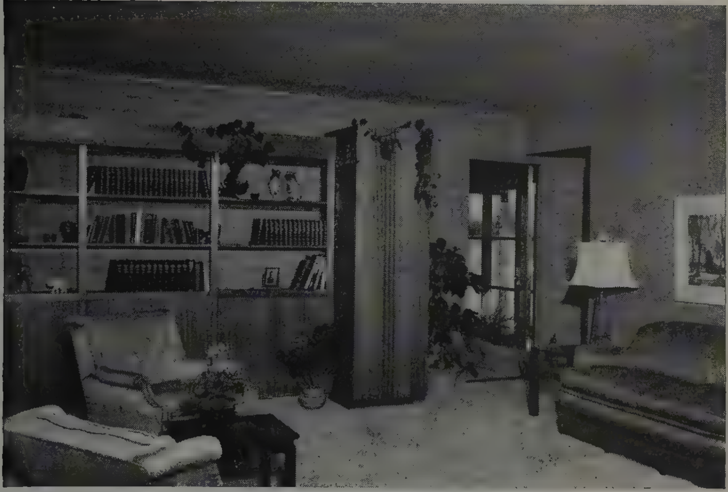
Not the least of Mrs. Shahan's abilities are her persistence and salesmanship. To prove that her house could be built at her price, she got sub-bids on every item before calling for a general contractor. And to prod FHA officials, she showed how she would operate—and how she would sell.

One Sunday in October 1950 she put an ad in the paper, a sign on the property, and drove out and sat in her car with blueprints adhesive-taped to the windshield. In two Sundays, while laborers were clearing the land and surveyors laying out the lots, Mrs. Shahan sold 10 houses; within a month, 35 more; the whole 75 were sold before they were finished, at a total cost of less than $500 for ads.

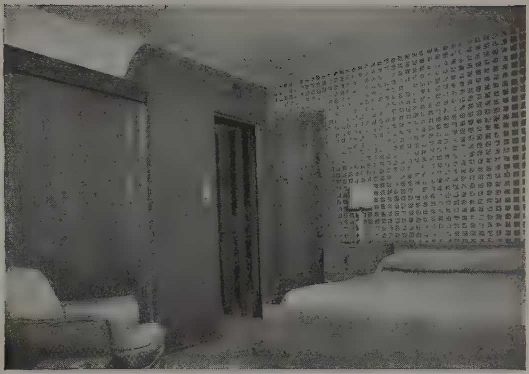
All this in an area reportedly overbuilt and where houses are going at a small profit if any. The reason why is given by impartial observers who say that these are "more house," "better design," and "more complete." Not only are local people excited: Mrs. Shahan says she has had letters from 11 states requesting the plan—which she is glad to send out as "one answer to low-cost own-your-own homes."

With this record, Mrs. Shahan is encouraged for the future. She hopes eventually to have a total of 340 houses on her land, now is awaiting FHA Title II approval for the next 20, to sell for under $7,000. Chief reason why Mrs. Shahan wants Title II financing is that it will reduce the required down payment to about $650. (When she first started her original 75 houses, selling price was to be $5,370; when rising costs forced her to push it up to $5,880, down payment had to go up from $620 to $1,130 because maximum FHA commitment under Title I is $4,750.) These next houses will have the same basic floor plan plus a 4' x 8' exterior storage room, exterior painting, paved and curved streets, planting and trees.

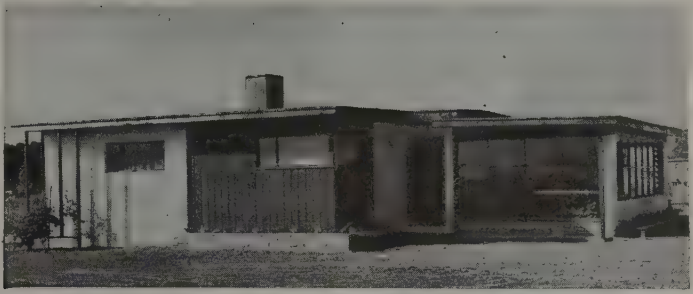
Judging by past performance, there is no doubt but what plenty of young buyers (in the whole development, there are only five people over 50) will come and get what Mrs. Shahan calls a "house to grow up in."

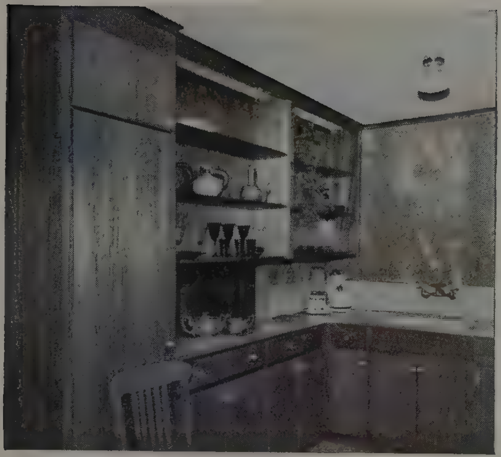


Opposite end of living room at left shows the bookcase and coat closet facing the front entrance, and door to studio-sunroom. (This is Mrs. Shahan's experimental model.)

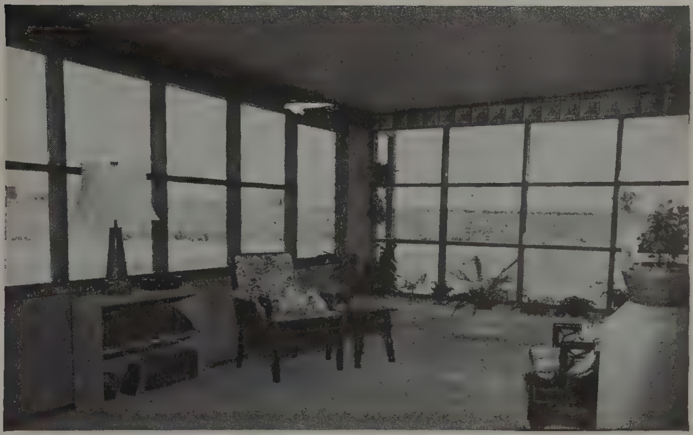


Corner of larger bedroom shows vent (above door) for cooling system; cool air is blown through plenum chamber in hall, and on into vents in every room. The wardrobes, topped with cove lighting, are 15" below ceiling height.





Kitchen is an efficient, compact U arrangement, with a splendid array of cupboards, shelves, broom closet (left corner). Note kitchen work counter doubles as snack bar.



With house turned so bedrooms face front, carport can be converted into a studio-sunroom (above), extra bedroom or playroom. Redwood trim is one of nine exterior variations.

COST BREAKDOWN

Land	$700
Water, roads, trees	175
Concrete, slabs, etc.	430
Reinforcing steel	61
Pumice block masonry	431
Lumber, and mill work	489
Wood sash and doors	73
Steel sash, copper screens	77
Cabinets, wardrobes, etc.	361
Roof	102
Plaster, incl. labor	248
Electric wiring and fixtures	108
Heating	88
Metal ducts	50
Plumbing	430
Painting, floor sanding	242
Hardware, rough & finish	35
Asphalt tile	30
Insulation	59
Carpentry	410
Septic tank, sewer connections	87
Glass, mirrors, etc.	45
Removing debris	15
Insurance	41
Contractor's fee & overhead	300
Financing, bank, etc.	272
Architect's fee, surveying fee	57
Title	13
Profit	451
TOTAL selling price	$5,880

THE CASE FOR THE WIDER LOT

If the builder of today's $8,000 to $15,000 house took a closer look at costs, he might find a wider lot would increase his house's salability at little extra expense

Sixty-foot lots do little to aerate this West Coast boxcar row. Wider lots would have permitted better orientation, more privacy.

Many a builder thinks twice today before putting windows on the sides of his houses. He hesitates because the house next door is so close side windows might create the shortcomings of a fish bowl.

Though the amount of raw land available in the U. S. totals hundreds of millions of acres, the plot of ground beneath today's "good" subdivision house is seldom more than 7,200 sq. ft.—120 to the rear, 60 along the front. No doubt even 60′ x 120′ represents progress, for 25 years ago lots were more apt to be 40′ wide. But 25 years ago the houses on those 40′ lots were apt to be two-story affairs, whereas today's small house is apt to be a ranch house 35′ long with a 10′ garage at one end. And a 45′ rambler can be almost as crowded on a 60′ lot as a 25′ house on a 40′ lot.

In brief, although the 1951 subdivider may have designed a fine house and thrown in food freezers and garbage disposers, the chances are he crowded his houses in architectural claustrophobia; end-to-end in a virtual elephant chain, trunk hitched to tail.

"Sure," cries the subdivider, "there's nothing I'd like more than to give my customers nice, wide, roomy lots. But money doesn't grow on trees, you know, and additional front footage costs something, *especially* for improvements we have to put in. How can we afford to throw in a 10′ wider lot?"

Perhaps the best answer to that question might be to ask the builder if he knows just what the extra 10′ would cost.

It might not cost him anything at all. Bill Levitt, moving up from 60′ lots in Levittown, L.I. to 70′ lots for all but the smallest houses in Levittown, Pa. says: "Most builders spend more money squeezing their houses on to 60′ lots than it would cost them to provide adequate frontage." John Highland, architect chairman of the NAHB Design Committee, says an irregular roof needed to fit a narrow lot may cost enough extra to eat up all the economy of a narrrow lot. Others have found grading costs or septic tank costs much higher on narrow lots, which also allow inadequate area for intelligent site planning even for such simple things as moving the house a little to save old trees.

But even without these savings, the extra 10′ is not very expensive. The added land (not counting improvements) would cost as little as $15 at $500 a raw acre, only $30 on land costing the more customary $1,000 an acre, only $60 at $2,000 an acre.

Improvements are something else, of course—and some communities require improvements far in excess of Urban Land Institute standards—"a Cadillac chassis for a Chevrolet body." Average is $13.90 a front foot—$834 for a 60′ lot, $973 for a 70′ lot. Is the added $139, spread over 25 years, more than a buyer would pay? His lot would be only 17% bigger—but the spacing between houses would be 67% greater—25′ instead of 15′. And his home would be far safer against the creeping blight which always follows overcrowding—"neighborhoods wear out much faster than houses."

What all this adds up to is that any builder who thinks the net cost of an added 10′ will be anything like $200 is probably one of two kinds of optimist:

1. An optimist who thinks it will cost nothing at all to squeeze his house down to fit a narrow lot, or
2. An optimist who counts as cost the profit he might hope to make on more houses jammed on to his development, forgetting that he could sell more houses quicker if he bought a little more land to build them on.

On one point there seems to be considerable agreement between the subdividers themselves, the architects who design their houses, the land planners who define lot sizes, the government officials who regulate house financing, university professors who make objective studies, real estate brokers who deal in raw land. That point of agreement is that there should be a ratio close to 15% between the cost of the improved lot and the sales price of the house. If the improved lot costs more than 15%, FHA and the mortgage bankers start finding the project "undesirable from an appraisal standpoint." On the other hand, it makes no sense to spend $7,500 construction money on $500 land. The table at the bottom of page 161 shows where this 15% point comes for various sizes of lots at various raw land costs. It indicates, for example:

- ▶ An $8,000 house can have a 70′ frontage on land costing up to $1,250 a raw acre.
- ▶ A $10,000 house can have a 70′ frontage on land costing up to $2,500; an 80′ frontage on land costing up to $1,500.
- ▶ A $15,000 house can have a 100′ frontage on land costing up to $3,000.

Improvement costs vary. The improved front foot (with allowances for side-street engineering included) costs $16.04 in the North Atlantic states, $13.05 in the South Atlantic states, $14.32 in the North Central states, $12.05 in the South Central states, $14.03 in the Far West states. The national average is $13.90 per improved front foot. These are mean figures compiled by the FHA from most of the country's developments.

Individually, HOUSE & HOME learned improvement costs fluctuate a good deal depending upon topography, existing water and sewage tie-ins, community requirements and the extent to which utility companies are willing to co-operate.

Sanitary sewers vary from $2.90 per lineal foot in the Midwest to $6.75 in the East. Water mains, $2.50 in the East, $12.10 in the Midwest. Grading, $2.10 in the Midwest, $4.75 in the East. Curbs and gutters, $1.50 in the West, $4 in the East. Paving, $4.32 in the West, $7.10 in the Midwest. Sidewalks, $1.20 in the West, $3.20 in the East. Storm sewers, $1.70 in the Midwest, $7.80 in the West.

Raw land prices reach even wider extremes: $25 per acre in the "distressed sale" of probated estate land; $200 to $3,000 in northern New Jersey; $500 for rugged hillsides in California's Marin County; $400 in Oklahoma; $1,500 in New Jersey's Mercer County; $825 to $1,500 in the suburbs of East Lansing, Mich.; $900 in Phoenix; $250 to $750 in South Bend, Ind.; $750 to $1,000 in Denver; $1,000 in Kansas City, Mo.; $800 to $1,000 in Seattle; $2,000 in Miami; $2,500 to $4,000 along the elegant North Shore of Long Island's Nassau County; $1,200 in the area around Chicago; $1,500 in that around St. Louis. A pretty good national average, however, is around $1,000 per acre for raw land suitable to hold the $8,000 to $15,000 house subdivision.

In strictly raw land dollars and cents, it costs $22.96 per 1,000 sq. ft. on $1,000-per-acre land. In other words, the average 60′ x 120′ lot costs $165.31 raw. Adding another 10′ x 120′ slice to it to bring its width to 70′ would only be spending $27.55 more for raw land.

An additional 1,200 sq. ft. of $1,500-per-acre land would cost the builder $41.33; of $2,000-per-acre land, $55.10; of $3,000-per-acre land, $82.66. On $500-per-acre land the cost of an additional 1,200 sq. ft. in raw land is a mere pittance—$13.90. Raw land, which has the virtue of permanence, can then be provided for the price of an electrical "extra." And its price is not an inflated one for land costs have risen far less than building costs in the postwar housing market.

The pro-wide lot group

There is a battery of arguments to show why the greater lot width is not only economically feasible but now almost mandatory under FHA zoning restrictions. Builders have found people *want* wider lots and they are willing to pay more to get them. Architects find more width means better platting, better designed homes. Site planners say the fewer lots per block, the lower the front footage in improvement costs. But let the wider lot advocates speak for themselves:

David D. Bohannon, California developer and former president of the National Assn. of Home Builders, finds the wider lot is not merely economically possible: "It contributes materially to the value of the individual house; there is no question of its desirability from the customer's point of view; houses look larger on a wider lot; the site can be developed to better advantage; the house owner gains additional privacy and freedom from noises; and, *within reasonable limits,* buyers will pay a little more for the additional lot width."

John Hancock Callender, architectural consultant to the Housing Research Foundation (the former Revere program), finds the wider lot promotes: having a house's main axis

COST OF VARIOUS SIZE LOTS—assuming a range of raw land prices and a fixed cost of improvements at $13.90 per front foot (U. S. average)

Raw land cost per acre

Lot Size	$250	$500	$750	$1000	$1250	$1500	$2000	$2500	$3000
60 x 120	875.25	916.50	957.75	999	1040.25	1081.50	1164	1246.50	1329
70 x 110	1017.25	1061.50	1105.75	1150	1194.25	1238.50	1327	1415.50	1504
70 x 120	1021.25	1069.50	1117.75	1166	1214.25	1262.50	1359	1455.50	1552
80 x 110	1162.50	1213	1263.50	1314	1364.50	1415	1516	1617	1718
80 x 120	1167	1222	1277	1332	1387	1442	1552	1662	1772
90 x 100	1302.75	1354.50	1406.25	1458	1509.75	1561.50	1665	1768.50	1872
90 x 110	1307.75	1364.50	1421.25	1478	1534.75	1591.50	1705	1818.50	1932
100 x 100	1447.25	1504.50	1561.75	1619	1676.25	1733.50	1848	1962.50	2077
100 x 110	1456	1516	1579	1642	1705	1768	1894	2020	2146
110 x 110	1598.25	1667.50	1736.75	1806	1875.25	1944.50	2083	2221.50	2360
120 x 120	1750.75	1883.50	1916.25	1999	2081.75	2164.50	2330	2495.50	2661

Above ▪▪▪▪▪▪▪ falls within 15% FHA approved zone for an $8,000 house
Above ▬▬ falls within 15% FHA approved zone for a $10,000 house
Above ●●●● falls within 15% FHA approved zone for a $15,000 house

The table shows how $8,000 to $15,000 houses can have 70′ to 120′ widths and still be within FHA's 15% ratio.

parallel the street to preserve the rear area for privacy; confining the carport or garage to the side; providing large side windows. "A wider lot means more decorative planning, more recreational area, a more functional use of the lot."

Builder Robert Jemison, Jr., of Birmingham, Ala., says developers have been penny-wise and pound-foolish in crimping lot widths. "A housebuilder is often justified in temporarily omitting some of the frills in a house in order to have adequate land. Otherwise the houseowner becomes disappointed when someone builds on either side of his small site, destroys his privacy and depreciates the value of his house."

Professor William A. Malone, of Michigan State College's Department of Landscape Architecture and Urban Planning, says studies show where there is a density of more than six families per block additional recreation area should be provided for the children. "Too many real estate developments still are being platted on minimum requirements. In a great many of these developments blight is planted before a stake is driven." And Malone's studies show too many lots per block mean higher maintenance and repair bills through greater traffic and, of necessity, higher taxes in the future. Some communities, particularly in Northern New Jersey, have stopped issuing building permits. Builders put up so many houses per acre in their vicinity that school and community facilities can't take any more people. Miami's Dade County has just put in a 7,500 sq. ft. minimum to keep builders from doing the same thing to them with their 60′ x 120′ lots.

Ralph Eberlin, East Coast civil engineer and site planning specialist for such communities as New Jersey's Radburn and the forthcoming Aluminum Co. of Canada town at Kitimat, B.C., has figures to show that wider lots mean fewer people and less traffic on the street. This means sidewalks can be eliminated or cut down to one side and street pavements narrowed. (FHA officials say there is really no advantage in holding to 30′, all-purpose width for purely residential streets; 26′ allow one car to park and one to pass. Instead, FHA suggests, the collector streets, which occur much less frequently, should be pushed to 32′ or 34′.)

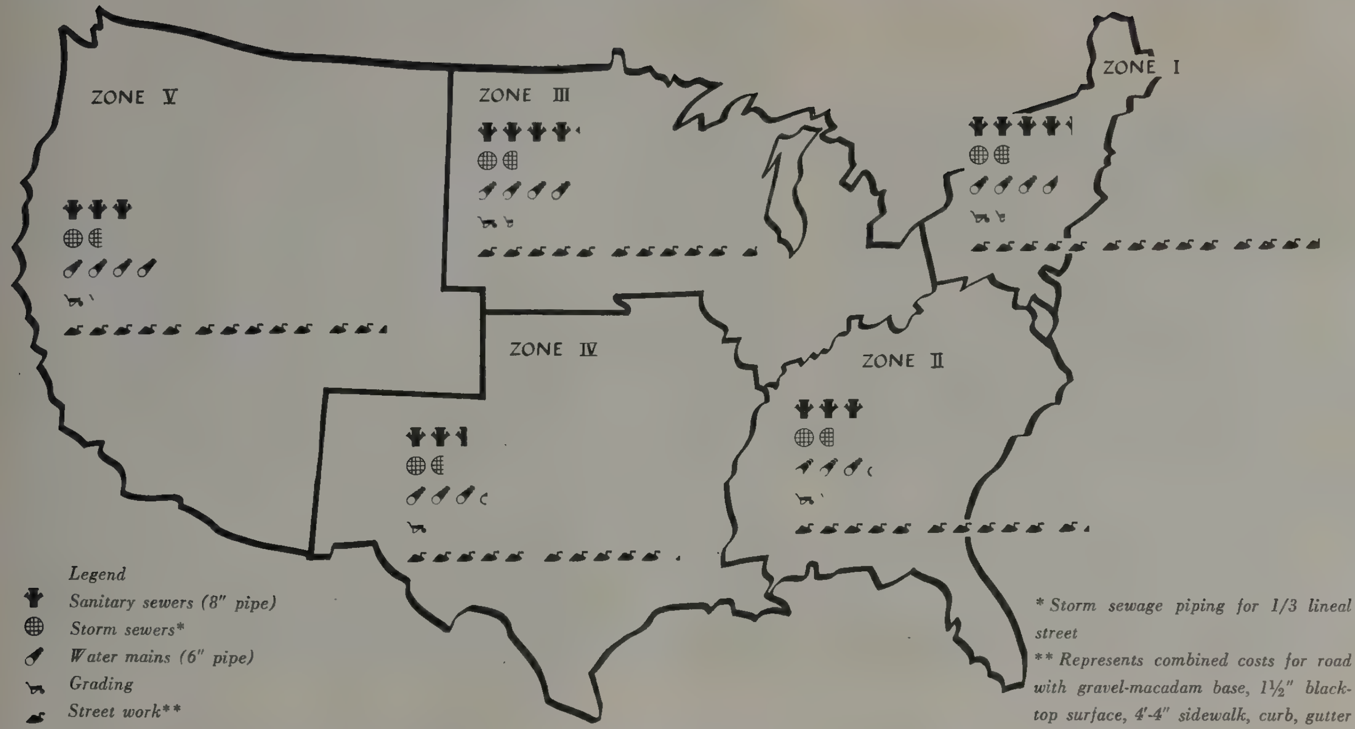
Another site planner, **Roger Wilcox,** put together his own co-operative development on Long Island Sound and found that his wider frontages (100′) let him use septic tanks instead of sewers, thereby halving sanitary costs for a 60′ lot.

Other wide lot proponents find sewer and water pipes can be cut down from 10″ to 8″ diameters on a less crowded street, another saving. There are those who say builders can cut down on lot depth when they provide more land on the sides of their houses, contending householders don't bother cultivating anything beyond the 100′ depth anyway. With more leeway in the width, land planners can lay out a more interesting neighborhood. Wider lots provide expansion room for later-day additions, something a householder might be pondering when he moves in with one child and (though he may not yet have talked it over with his wife) anticipates several more when times become more prosperous. Unclaimed lots, left over after the major part of the subdivision is complete, will sell more easily if they are wider. And greater spacing between houses means less chance of fires spreading.

S. E. Sanders, Washington, D.C. city planner, was able to draw a neat comparison between lot sizes in laying out a north and south section for the Woodley Homes in Fairfax County, Va., across the Potomac from Washington. In the south tract, which had 10,000 sq. ft. lots, he was able to save trees, do a minimum amount of grading and permit the builder to cut down on foundation costs by laying his slabs directly on the grade. In the north tract, where the plots were 7,200 sq. ft., trees had to be removed, three elevations of grading were necessary. Houses on the south tract, partly because they were built first when costs were lower, sold at the same price as those on the north.

The Urban Land Institute recommends the 70′ lot width for ranch-type houses in its *Community Builders Handbook,* finds ranch houses demand outdoor as well as indoor privacy.

"If I had only known how it would look later . . ." some builders whisper after failing to provide their developments with breathing space. These houses are on 50′ lots—virtual claustrophobia.



** Storm sewage piping for 1/3 lineal street*

*** Represents combined costs for road with gravel-macadam base, 1½" black-top surface, 4'-4" sidewalk, curb, gutter*

The map above shows comparative lineal foot improvement costs in the five main U. S. zones. Front footage costs (including trees, planting strips, street signs, a 6% allowance for engineering and 15% for intersections): $16.04 for Zone I; $13.05 for Zone II; $14.32 for Zone III; $12.05 for Zone IV; $14.03 for Zone V. U. S. average: $13.90.

The anti-wide lot group

Not everybody is for the raw lot, naturally, or the millions of raw acres in the U.S. would be nibbled at more rapidly. Primarily, the subdivider in his capacity as realtor objects. He wants to carve as many lots out of his commodity—raw land—as possible. However when it comes to his capacity as builder, the subdivider's argument falls short. Here he is interested in *selling* houses, to the extent of throwing in all sorts of "extras" like stoves and washing machines. Yet, for often the same price, he neglects the most salable "extra"—the permanent one of additional land to guarantee the house privacy during its lifetime. Here is what the anti-wide lot group contends:

William Feder, executive of Housing Associates, Inc., builder of Long Island's large Forest City, says people are primarily interested in getting as much house as possible for their dollar; lot size is a purely secondary consideration. He reports Forest City experimented with houses on 75′ and 85′ lots, found them nowhere as salable as its houses on 60′ lots. (Forest City, however, charged $40 more per front foot for these lots.)

One Seattle builder reports the $6,000 to $10,000 householder doesn't keep up his side yards, *isn't interested* in greater width. Others point out the FHA refuses to accept a valuation higher than a house's replacement cost—not even that if it considers the cost inflated. Therefore the builder has to work within a pretty close margin to anticipate the final say-so from government. On the West Coast, some builders say people actually *prefer* narrow lots, rely on fences for their privacy.

Seward Mott, land planning co-ordinator for many large developments on the East Coast, thinks the idea of stretching lot width at the expense of depth can be way overdone. He finds it more economical for subdivision houses to have narrow widths and longer depths, thus giving the householder more land without increasing the front foot improvement costs.

House & Home also wondered about the feasibility of squaring a lot—cutting back on rear land and evening off the sides, balancing at least the raw land loss and gain.

Mott thinks this would be pretty difficult. Supposing, says he, you select a 90′ x 90′ lot. Houses normally require at least a 25′ setback to meet FHA standards. They have a 30′ depth. If the entire lot depth is only 90′, all that remains for the back yard is 35′—not much romping room. And then, he reasons, if you extend the lot depth, you also have to extend the lot width in order to maintain the square pattern. And with the increase in width you begin to exceed the 15 per cent ratio of lot cost to total cost.

Beyond the decision of an individual subdivider, the lot size is also governed by zoning regulations. The FHA, before granting its approval for financing, requires a 25′ setback from the street for close-in areas; a 40′ setback for those further out. For ranch-type houses, as noted earlier, it requires a 20′ distance between walls of adjoining houses, averaging out as a 10′ setback on each side. The FHA considers 100′ as a practical minimum for depth; sometimes approves 95′. Communities also have ideas on minimum frontages and over-all lot size.

Whatever his individual problems, a subdivider, providing his improvements are within or below the national average, cannot discount the dollars and cents statistics:

▸ 70′ to 100′ lots *are* possible for $8,000 to $15,000 houses.

▸ Ten additional front feet of improved land *can* be added to a 120′ deep lot for as little as $165.31—the price of the small gas range often thrown in as an "extra".

▸ Raw land itself costs practically peanuts—$22.96 per 1,000 sq. ft. for $1,000-per-acre land.

Plus this, the subdivider can take some pretty sure risks:

▸ His house, sitting on a wider lot, will look individually better, and add to the quality of the whole subdivision.

▸ People, within reasonable limits, are willing to pay more for width—fellow subdividers have already discovered that.

WHAT'S NEW IN SLAB HEAT?

In Cleveland it's fiber duct feeders installed in a new way

Every builder who switches to slab construction has to face the problem of choosing a heating system.

Builder Robert Dvorak of Cleveland spent 14 months studying other builders' methods before he decided on a new variation of a warm air perimeter system which he thinks has several advantages.

He uses seven radial feeders of 6″ laminated fiber duct which are imbedded in his slab. His ducts lead directly from a counterflow furnace to a concrete box beneath a floor register. There is no perimeter circuit.

While many builders have used radial systems, this is reported to be the first done in this manner. Dvorak uses a precast plenum below the furnace and precast register boxes. On the rock or gravel base strips of 10″ fiber duct split lengthwise (see photographs) are laid. On top of them is placed a building-paper moisture barrier. The 6″ warm air duct is located directly over the half-duct troughs.

Purpose of the lower trough is to speed installation, as it eliminates making a trench in the gravel and assures a 2″ clearance of concrete below the heating duct. As the slab is poured, concrete flows below the duct which rests on 2″ wood blocks or concrete cradles.

Advantages of this method

No metal. Except for a few sheetmetal collars where ducts terminate at angles in the plenum, no metal is used.

Speed of installation. One long piece of duct from the furnace to the register is easier and faster to handle than numerous short lengths of other duct material.

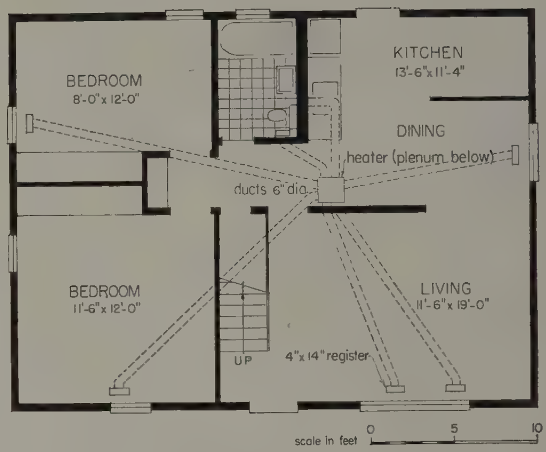
Control. Positive control of 2″ shell of concrete surrounding duct is assured because small duct rests in larger, half-duct beneath. Clearance is maintained by wood blocks or precast concrete cradles. Ducts will not float during construction.

Cost saving. Unless a builder has a source of very cheap material for other ducts, these fiber ducts are cheaper than sheetmetal or sewer tile. Cost for Sonoairduct in less than carload lots is around 23¢ per linear ft. for the 6″ size. The 10″ size split at the factory costs around 20¢ per ft. for the half section. Thus the two pieces total around 43¢. Dvorak uses slightly over half as many feet of duct as if he used four feeders and a complete perimeter duct.

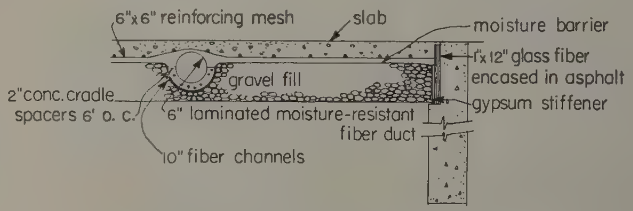
Most of the 150 builders who are now using Sonoairduct do not put a split portion below the moisture barrier.

Dvorak builds a two-bedroom, 768 sq. ft. house (plus an expandable attic) which he sells at $11,500 to $13,000. His heating system costs $385 for furnace, ducts and registers, including a duct running up to the second floor. This is about $50 cheaper than if he installed a perimeter system with conventional ducts.

Dvorak's system loses one of the benefits of a true perimeter design which is to keep the outside areas of a slab warm by an encirclement of warm air, since his ducts touch the outer area in only five places. However, his system was designed by an experienced heating engineer, has the blessing of the National Warm Air Heating & Air Conditioning Assn.



Plan of Dvorak's heating system shows seven radials that lead from central plenum to register boxes. An additional opening in right-hand side of plenum. not shown here, is used for a duct up to expansion attic.


6"x6" reinforcing mesh
slab
moisture barrier
1"x12" glass fiber encased in asphalt
gypsum stiffener
gravel fill
2"conc. cradle spacers 6' o. c.
6" laminated moisture-resistant fiber duct
10" fiber channels

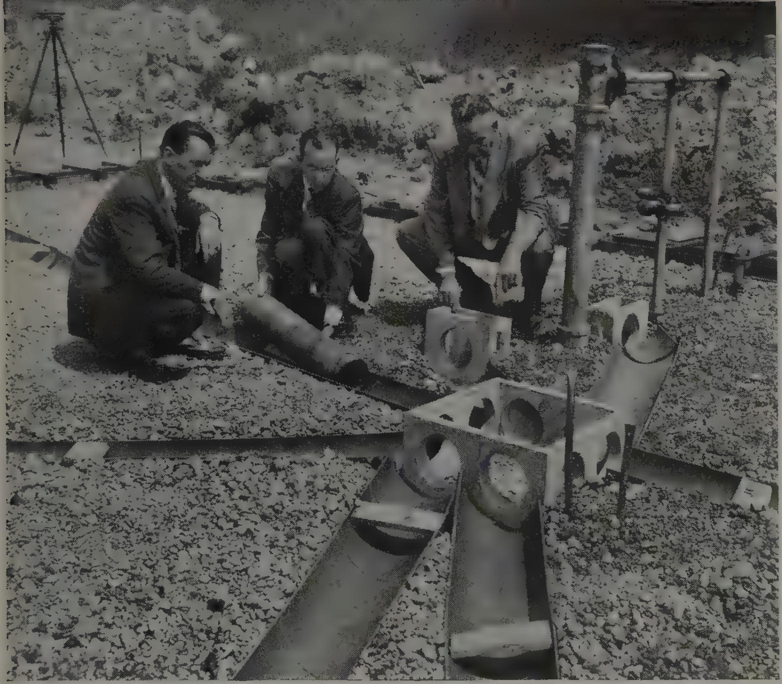
Cross-sectional drawing shows details of construction. Moisture barrier lies on top of both gravel and 10″ fiber channel. Two inches of concrete separate the 6″ duct from moisture barrier and channel below.

Some builders will be more concerned about the quality of the ducts than about efficiency. Can ducts be crushed by careless workmen? Will they absorb water? How long will they last?

After Bureau of Standards tests the ducts were accepted by both FHA and VA. They are strong enough so they will not be crushed by workmen walking on them or by the weight of cement. Because of an outer wrapper impregnated with asphalt the material will not absorb moisture. Whether they will last as long as the house remains to be seen.

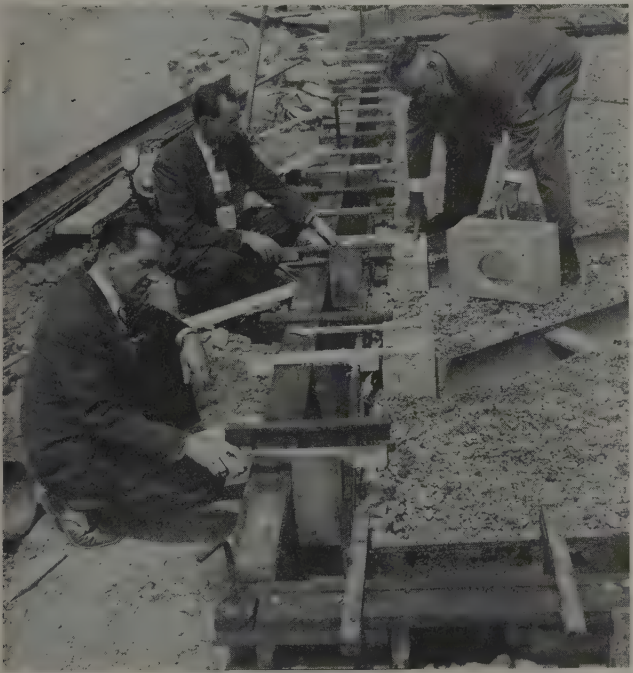
Because he built on hilly ground where there will be a drainage problem, Dvorak took great pains to make his slabs dry. He talked slab construction with other builders, including several sessions with Levitt's technical expert Irwin Jalonack. He was careful to pour his slabs in warm weather. If there was the slighest chance of rain, he covered his crushed rock base at night with a tarpaulin so it would not absorb moisture just before the slab was poured.

On some of his lower lots he used two moisture barriers, one below and one on top of his gravel fill. He also put special drains between high and low ground to carry off the water. If study and care will produce a good slab and an efficient heating system, Dvorak should achieve them.



The 10″ fiber channels before moisture barrier is spread. Precast plenum pit is made by local burial vault firm. Left to right: Dvorak, James Martin of Warm Air Assn., City Heating Inspector John Scheel. A wood cover keeps concrete out of plenum.

Wood stools, like the one held by Dvorak, are inserted in precast register boxes to keep out concrete and all other rubbish while construction is going on.



Foundation walls and slab are poured in one operation. Portable wood form serves as outside wall. Inside wall is 1″ x 12″ insulation board of asphalt covered glass fiber with a ½″ x 8″ gypsum stiffener. Removable paddle dams (held by Dvorak in foreground) serve as form spacer as well as helping to control the pouring operation. Inspector Scheel, right, is pointing to precast register boxes. This corner of the house is the living room where two registers are close together under a 6′ window.

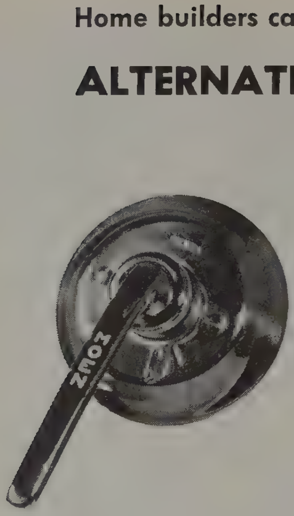
At this stage the moisture barrier has been laid over gravel fill. Six-inch ducts are now resting in trough made by lower channel. As slab is poured, concrete flows entirely around the air duct, forming 2″ covering.

If there was any chance of rain, tarpaulins were spread over gravel at night to keep out moisture before next day's slab pouring. Six by six reinforcing mesh is used.

Home builders can cut their use of critical items with

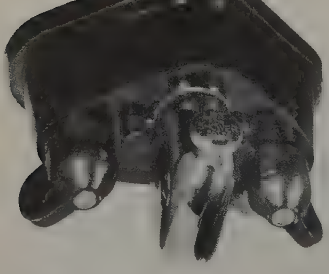
ALTERNATE MATERIALS, NEW PRODUCTS

NPIA's Joseph Schulte



This single mixing valve for showers does the work of two, saves copper. There are others for basin faucets.

"Fronteer" metal front sets for all-wood cabinets are made by Western Metalcraft Corp., Olympia, Wash.



Malleable iron coated inside and out with glass replaces 80% of copper in this Repcal Surface Fitting for tubs.

*How can architects and builders produce more houses using less copper, aluminum and steel? Last fall NAHB hired Joseph Schulte, president of the New Products Institute of America, to track down new and old products and materials that might answer this question. When NAHB convenes this month in Chicago, most of Schulte's findings will be on display for builders to see, touch and talk about. Following is a partial NPIA-*House & Home *survey of what's on the market:**

Iron fittings—Malleable iron coated with glass has eliminated 80% of the copper in faucets manufactured by Repcal Co., Vernon, Cal.

Single mixing faucets—Fixtures like the Moen Mixing Valve blend hot and cold water in one faucet, reduce amount of copper normally needed for two. Has been marketed for several years by Ravenna Metal Products, Seattle.

Plastic fittings—Plastic has replaced copper and chrome for showerheads in some stock lines such as Repcal. Water faucets with durable escutcheons and handles of American Cyanamid's "Beetle" plastic are being molded by Plastic Masters, Inc. of Buffalo, Mich. A new electroplating method now enables Plastiplate Co. to produce all-plastic doorknobs and fixtures with a thin tough coat of chrome, nickel, brass, lead.

Aluminum wire—lighter, cheaper, with 84% of copper's conductivity, it has been in use for some 40 years, mostly for service cable. Okonite, U. S. Rubber, General Electric, General Cable and others have developed smaller insulated sizes for residential use.

Low voltage switch control—GE, Square D, the Touchplate Co. of Long Beach Calif.. among others, make low voltage systems said to eliminate 3 lbs. of high voltage copper wire and 15 lbs. of steel in an 800 sq. ft. house. Relay is located in a plastic box at the light; cables have non-metallic sheathing. In service four years, notably in Southern California.

Conduits—Plastic "Carlon" tubing is being used in 300 homes in Houston as telephone wire conduit; light, flexible, can be stapled.

Plastic pipe—widely used by industry for corrosive chemicals and gases; has been in service underground as gas line since 1942, is now in use for cold and warm water. Competitive to copper in price, it can be used for drinking water, sludge, cooling, electrical conduit, radiant slab heating. In one underground water department installation in Detroit it appears to be outlasting lead and copper it replaced. Noncorrosive, light shipping weight, comes in long lengths with plastic fittings. May soften, enlarge, sag if used for domestic hot water. Make sure of local codes, though. In widest use is "Carlon" (Carlon Products Corp., Cleveland). Among the others: Mills Plastic Pipe (Elmer Mills Corp., Chicago); "Kraloy" (Golden Bear Co., Los Angeles); "Plastimode" (Plastic Process Co., L. A.).

New plumbing code. The National Plumbing Code being adopted by many communities can reduce use of metals in a house by 42%—in a five-room, one-bath house; for instance, pipe could be reduced from 1,639 lbs. to 934 lbs. Biggest items: 1) reducing the soil pipe from 4″ to 3″; 2) reducing the weight of pipe from heavy duty to standard; 3) reducing the size of roof vents from 3″ to 2″, adequate to stop back venting (re-venting is unnecessary as long as bathroom fixtures are within 8′ of stack); and 4) eliminating most of the shut-off valves usually placed on riser pipes to bathroom fixtures as an added convenience. instead permitting just one master valve on the street side of the meter.

Heating systems—Substitutes for metal duct work: hollow core concrete slabs for combination perimeter heating; glazed tile ducts. hollow concrete blocks. In areas where electricity is cheap (i.e., TVA) electric radiant heating can save copper pipe, duct metal. Among the non-metallic ducts: **Sonoairduct**—a laminated fiber tubing in slabs for warm air perimeter heating. Must be imbedded. (See page 164.) **Lasco**—a reinforced asbestos duct for overhead or basement duct work made by Lynch Asbestos Co., Los Angeles; sound-absorbing, low-cost, can be sawed, assembled quickly. Available in different sizes; delivery in California only.

Flashing—Rubberized asphalt sheeting such as "Seal Pruf" (Rubber & Plastic Compounds, New York) is cheap, non-organic, pliable, durable, accepted for concealed door and window flashing (March issue '51). Other non-metallics are "Wasco Fabric Flashing" with a 15 lb. felt core, "Fabricote," a 4 oz. asphalt-saturated fabric covered with an 18 oz. bituminous compound on each side (Wasco Co., Cambridge, Mass.)

Thin copper sheeting backed with paper or fabric is scarce, most going on defense orders. Among the brands: "Copper Armored Sisalkraft" (Sisalkraft Co.), "Cop-O-Top" (Chase Brass & Copper Co.) and "Cop-R-Tex" (Wasco). Comes in rolls, is roughly one-third the price of regular copper sheet.

"Chino," a nonferrous alloy of copper, zinc and magnesium made by the Cheney Flashing Co., Trenton, N. J. is in wide use and ample supply nationally. It comes in rolls, sheets and through-wall flashing, sells at a little more than half the price of copper.

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* Suggestions for expanding this list by builders and architects as well as manufacturers will be considered for publication in a subsequent issue.

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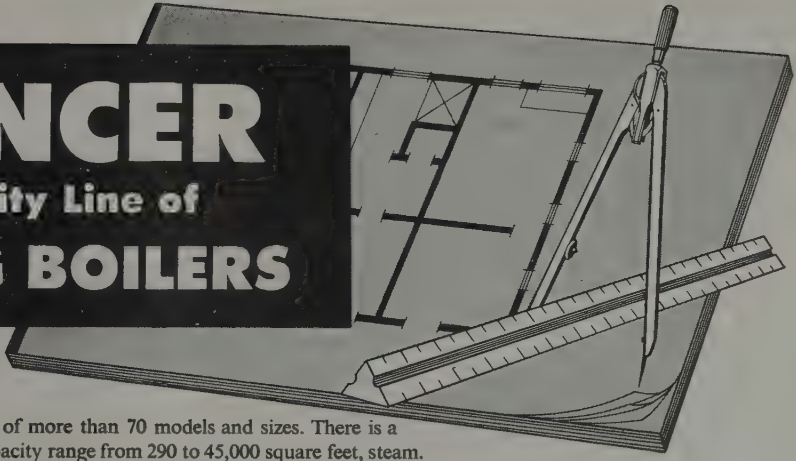

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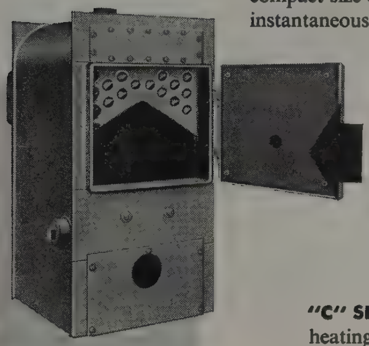

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- Available with either standard or extended jacket

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"21" SERIES—the new all-purpose cast-iron boiler—8 sizes available, in capacities ranging from 340 to 1,000 square feet, steam.

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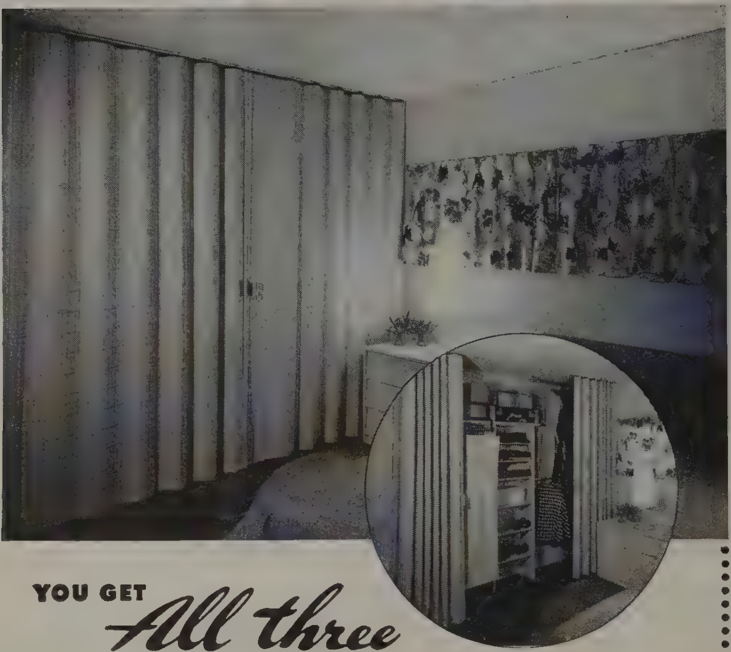

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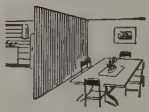
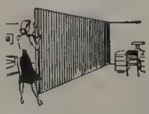


ROOM DIVIDERS



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THE PREFAB INDUSTRY

Government survey shows rapid growth, a high potential

A survey of 53 prefabricated house manufacturers for the year 1950 has turned up some interesting new statistics about one of America's fast-growing industries:

- Output at about 40,000 units per year has doubled since 1949.
- Under forced draft the industry could produce more than 100,000 units a year without expanding present facilities.
- The five largest concerns produced 62% of the total volume.
- The average two-bedroom prefab sells for about $8,000 excluding land.
- 4% of the industry's customers bought 45% of the industry's production.

Such were the highlights of an address before the fall meeting of the Prefabricated Home Manufacturers Institute by HHFA's Philip A. Randall.* His agency's findings are presented in detail below:

Production: Prefabricated houses accounted for about 4% of the total residential starts in the country during 1950. Total output in 1950 nearly *doubled* that of 1949, up from 20,045 houses (45 firms reporting, an average of 445 units per firm) to 39,106 (48 firms reporting, an average of 815 units each). Since its birth, the industry has turned out close to 200,000 homes, an average of 4,050 per manufacturer.

Capacity: Most prefabbers were working below their capacity due to market conditions. If they all had been able to keep up one full 40-hour shift, the industry could have produced 64,461 units with existing plant facilities, some 60% more than they actually did under 1950 demands. Furthermore, 45 of the 53 said that by using two 40-hour shifts they could have turned out 106,574 houses, almost three times as many.

Price: The lowest cost house, naturally, was found to be the fastest seller. Sales in the under-$7,000 bracket were 45% of the total; $7,000-$8,000, 21%; $8,000-$9,000, also

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*Early this year the HHFA, in preparation for its report to the President and Congress, got together with the PHMI and sent out a questionnaire to determine the prefabbers' role in the nation's current housing picture, and to assemble a central file for information on the industry. Of the 168 manufacturers to whom forms were sent, 57 were found to be out of business or in some other line of work. (Many of these had taken up prefabbing as a sideline during World War II, later dropped out.) Of the remaining 111 firms, 53 responded. (Twenty-six of these were PHMI members, accounted for 85% of the total production.) There were some gaps in the survey, but HHFA considered their findings "representative of the major portion of the industry."

(Continued on page 174)

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WHEN you are building to endure, that's when copper really counts. In fact, copper is ahead on many counts. Its lasting qualities have been proved down through the centuries. It requires little, if any, maintenance and when aged, adds a distinctive note to the building. Its salvage value is unusually high.

And because it is so readily worked, installing Revere Copper Sheets to fit the unusual contours of roofs; such as the one that covers the Wollman Memorial Building, Central Park, New York; is done easily and speedily when applied by an experienced contractor in accordance with Revere's recommended techniques. Gutters, downspouts and frieze work on this building also are Revere Copper.

Although copper, because of government regulations, cannot now be used for roofing, we use the Wollman Memorial installation as a means of reminding you of the merits of Revere Copper so that when copper once more is permitted for roofing you will again use it. Meantime remember, while limited, you can still get Revere Sheet, Strip and Roll Copper for flashing.

For through-wall applications, ask the Revere Distributor about Revere Keystone Thru-Wall Flashing.* He also will advise you of the availability of materials and put you in touch with Revere's Technical Advisory Service in the event you wish to discuss your technical problems.

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21%; $10,000-$12,000, 10%; and $12,000 and over, 3%.

Most popular two-bedroom house (excl. land).	*Average*	*Minimum*	*Maximum*
Concrete floor slab....	$7,350	$5,800	$9,500
Crawl space	7,500	5,000	9,000
Basement	8,450	6,750	10,500

Most popular three-bedroom house (excl. land).	*Average*	*Minimum*	*Maximum*
Concrete floor slab ...	$8,500	$6,450	$10,800
Crawl space	8,750	6,770	10,500
Basement	9,900	7,925	14,000

Sales: The total of 39,106 houses in 1950 were sold to 3,024 customers. The largest single group (48%) bought only one house each. which added up to 4% of the total production. Only 4% bought more than 60 houses each, but these purchasers accounted for 45% of the year's output.

Distribution: 53% of the houses were sold by the manufacturer to the dealer for a specific owner. Only 21% went from manufacturer to a large operative builder for erection, and 17% were sold to dealers for erection and resale.

Comparative volume: As in other fields, the big prefabbers have the lion's share of the market. The five largest firms accounted for 62% of the total 1950 production; the top 15, 81%. The remaining 33 manufacturers produced the other 19%. The largest concern reporting turned out 10,000 houses; the smallest, 11.

Plant facilities: Ten manufacturers also had 60% of the 3,273,000 sq. ft. of total factory operation space, 62% of the covered storage space and 67% of the total open storage space. Only three of the top ten volume producers were in this group of big space users; however, the HHFA found "little relation" between space use and volume of production. Of the total space used for plant and storage, 74% was concentrated in 10 states: California, Indiana, Minnesota, Mississippi, New York, Ohio, Oklahoma, Pennsylvania, Texas and Wisconsin.

Manpower: During 1950 the average manufacturer of prefabs had 134 employees in actual production or "related work," 32 in nonproduction work. The five largest firms averaged 633 production workers, 159 nonproduction.

Age of firm: For a "young business," prefabbing had some remarkably old hands in the family. One firm had been in business 59 years, another 45, two others 30 years. The bulk of the field was still youthful, though: the other 49 firms reporting had been in the game an average of nine years.

Sidelines: Almost half (24) were in some other line of business besides prefabrication: mill-

(Continued on page 178)

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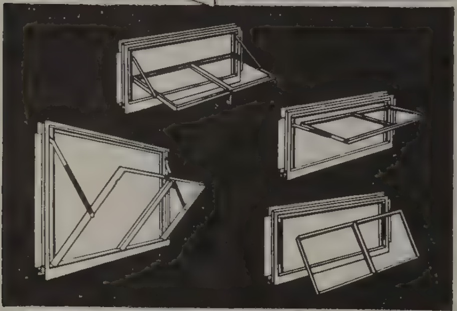

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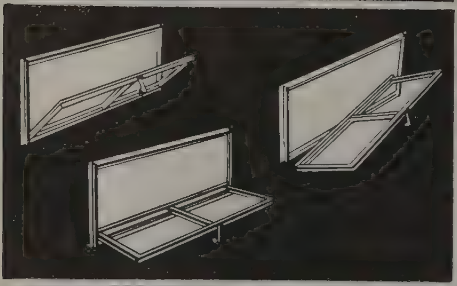

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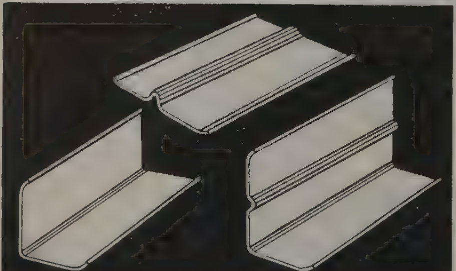

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TWELVE MODELS: Including six Counterflows for homes up to 2,000 square feet, and Hi-Boys and Lo-Boys rated at 64,000 BTU and up. There's a Conco Ranchief for every home you build.

OIL OR GAS-FIRED: Pressure oil, vaporizing oil or gas-fired using any common oil or gas. Convertible from oil to gas at any time with no loss in capacity.

COMPACT: 64,000 BTU models as small as 22″ x 22″. U. L. Listed for reduced clearances. Top flue outlet on living-floor models adds to compactness.

PACKAGED: Fully assembled and fire-tested at factory. Fully wired including controls. All wiring and operating parts fully enclosed. Complete furnaces U. L. Listed for oil or gas, A. G. A. Approved for gas.

BEAUTIFUL: Gleaming white enamel finish, smart styling mean attractive utility room or basement appearance.

Write **today for brochure, *"How To Heat a Basementless Home."***

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Warm Air Furnaces for Today's Builder

AFFILIATES: Materials Handling Division — Cranes, Hoists
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CONCO *heat*

Kick out these heating nuisances when *you* need to cut costs!

Model 991-14 (shown)—18" x 24"
Model 992-20—18" x 38½"

NEW, ROOM-SIZE "SAFETY-SEALED" UNITS ELIMINATE ALL THREE . . . ASSURE CLEAN, SAFE, DEPENDABLE GAS HEAT FOR *LESS!*

Here you gain all the advantages of central heating—without central heating cost. *Here* you gain big savings in chimney, ductwork and electrical costs—*for no chimneys, ductwork or electricity is required.* By burning gas in a sealed combustion chamber, then venting all combustion products outside after use, these compact units bring a degree of safety never possible before in gas heating. Bring you savings in floor space by eliminating the need for a utility room or central heating source.

Fully automatic, room-size units assure warm, steady, chill-chasing comfort. Free from drafts, free from "cold spots". Zone-controlled to suit individual room requirements. Installation – in any exterior wall of brick, wood or cement block construction is quick, easy, really low in cost.

Upkeep . . . maintenance? Always at a minimum. Trouble-free "Safety-Sealed" units have no moving parts to maintain or replace. Operate silently and dependably on either natural, manufactured or LP gas. All in all add up to a better heated, better designed, more saleable home.

Consider all these advantages . . . the real savings against rising building costs, greatly simplified heating plan, *plus* the added desirability of a heating system that completely solves moisture problems of combustion products in tightly insulated small homes. You'll want to specify and recommend "Safety-Sealed" gas heating on every job possible!

Get the facts: **Write now for complete free information and specifications on this latest development in modern gas heating. Clip and mail the coupon today.**

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Dept. K-12, 1514 Drover Street, Indianapolis 7, Ind.

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work, boxes, crates, furniture, garages, warehouses, farm outbuildings. Average time and money devoted to these secondary pursuits: 35%, although some firms put as much as 80% of their effort into them.

Methods: In variations on the standard prefab method, 40% of the companies had had experience in *demountable housing* (units which can be assembled at one location, knocked down and set up elsewhere). Only two firms had tried *sectional housing* (several complete sections connected at site to form a structure ready for occupancy). None indicated experience with *mobile housing* (complete dwellings transported to site in one unit ready for occupancy on connecting up utilities).

Materials: Here, again, the ten largest producers used from 60% to 90% of the total amount of building materials.

Lumber: (42 firms) average of 4,900 bd. ft. per house.

Plywood: (33 firms) average of 2,780 sq. ft. per house.

Insulation: (36 firms) average of 1,200 sq. ft. per house.

Wallboard: (30 firms) average of 2,990 sq. ft. per house.

Sheet steel: (11 firms) average of 310 lbs. per house.

Structural Steel: (11 firms) average of 103 lbs. per house.

Aluminum: (3 firms) average of 21 ft. of sheet, 2.4 lbs. of shapes per house.

In addition to materials processed in the plant, the following major items were included in the house "package": *roofing* (39 firms, 10 squares per house), *wood siding* (29 firms, 438 bd. ft. per house), *shingle siding* (32 firms; eight of these used shingle siding only for an average of 10 squares per house produced).

Most of the manufacturers also put in their package door and window assemblies; slightly more than half included kitchen cabinets and one-third included prefabricated heater units and chimneys. Only a few packaged-in water heaters, plumbing units and house wiring kits.

Major structural elements were shop-fabricated and included in the package as follows:

Floors (in panels)	27 firms	(51%)
Walls	52 "	(98%)
Partitions	44 "	(83%)
Ceilings	29 "	(55%)
Roofs	29 "	(55%)
Gable ends	46 "	(87%)
Roof trusses	35 "	(66%)

nd HOME in the news

and big-town, are *your* prospects!

ecause of the impact of LIFE's home furnishings orial and advertising pages on this vast audience, ufacturers of household equipment, supplies and shings spend more dollars for selling in LIFE in any other magazine.

LIFE

"A WAY OF LIFE WITH NEIGHBORS"

(LIFE, August 6, 1951)

What the multi-unit dwelling means to the family.

"Home building industry compliments LIFE on consistently fine coverage afforded subject of housing. Recent illustrated story on low-cost housing typical of your editorial attention to how housing industry is meeting today's housing needs. Your excellent impartial editorial and picture coverage is most appreciated."

W. P. ATKINSON, Pres.
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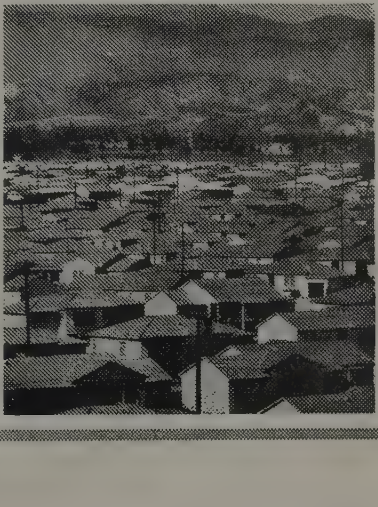

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HOT WATER HEAT for

with this popular TACO CIRCULATOR

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MORE HOT WATER FOR KITCHEN, BATH AND LAUNDRY

Yes, forced hot water heat with a TACO circulator gives all this *plus* economical warmth. No need for a separately fired water heater. TACO TANKLESS, hooked up to a heating boiler, supplies year 'round *low cost* hot water.

The TACO circulator delivers heat where it will give the greatest comfort . . . whether you use radiant panels, convectors, radiators or baseboards.

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Three other famous TACO PRODUCTS for houses

TACO-VENT eliminates air from hot water radiation automatically

TANKLESS TACO gives an abundant supply of hot water instantly. No need for storage tank.

TACO TEMPERING VALVE thermostatically mixes hot water with cold so there's no danger of its being too hot.

Better Heating-
Better with Taco

Taco

TACO HEATERS, INCORPORATED • 137 SOUTH STREET • PROVIDENCE 3, R. I.

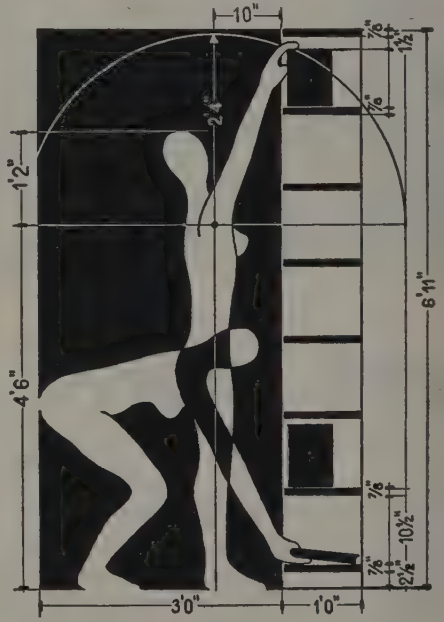
ANATOMY FOR INTERIOR DESIGNERS and HOW TO TALK TO A CLIENT (Second Edition)

by Francis deN. Schroeder. Whitney Publications, New York, N. Y. 96 pp. 9¼" x 10¼" illus. $4.50.

Ever since the ancient Greeks proclaimed that "Man is the measure of all things" interior designers have faced the problem of fitting furnishings and architecture to human anatomy. Their task will be made much easier by this second, greatly enlarged edition of one of the most useful designers' handbooks of recent vintage.

Wittily written and profusely illustrated with spritely, dimensioned line drawings, it shows how to scale today's living equipment to the basic measurements of the human figure. It also sheds some light on another intensely practical designers' problem—how to capture clients and keep them satisfied.

Initial chapters set up dimensional standards for the design and placement of all the types of furniture that an average man and woman (he is 5'9" high, and she is 5'8") might use in the course of a normal day. Author Schroeder stresses the fact that his criteria are not tied to any one style—"they will apply just as well to a Louis XV bergère as to a chromium and rawhide chair; to a quick lunch counter as to an office desk; to a Victorian love seat as to a park bench."



Possibly one of the most useful drawings in the whole series is this on shelving

For specialists in home interiors, there is an entirely new section devoted to the television room, the open plan living area and the dining room. On the controversial question of the proper distance for television viewing, the author takes a stand which will complicate the designer's problem in laying out an average size television room: "For people with normal eyesight,

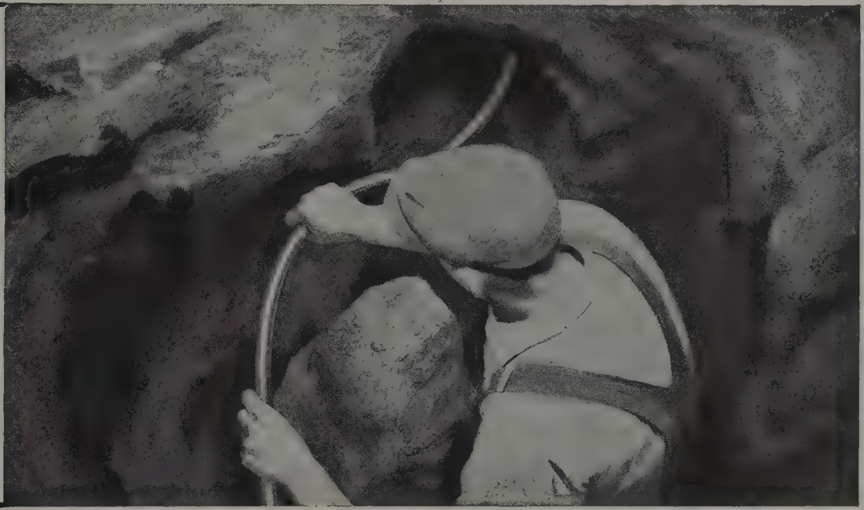
(Continued on page 184)

HIGH

For domestic hot and cold water lines you can still use copper — non-rusting, highly resistant to corrosion!

LOW

The use of copper for underground service lines—another place where you need this hardy metal—is not prohibited by government regulations!



...Chase Copper Water Tube is best!

Made from commercially pure copper, Chase Copper Water Tube is ideal for hot and cold water lines and underground piping.

Chase Copper Water Tube, Type L, hard temper, in 20 ft. lengths and solder-joint fittings are especially adapted for use in new construction. For replacing old rusted-out piping, Chase Copper Water Tube, Type K, soft temper, comes in long 40 and 60 ft. coils that can be snaked behind walls and under flooring.

For underground installations use Type K, soft temper, Chase Copper Water Tube. It is ductile; can be bent around obstructions; moves with the earth until the fill settles. Long lengths up to 100 ft. in coils reduce the number of flared fitting connections to a minimum.

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The beautiful new home of Dr. Lloyd Bonar, Mansfield, Ohio. In keeping with the custom-built character of this fine residence, Thomas Gene Zaugg, A.I.A. specified a streamlined batten seam roof of Follansbee Terne Metal.

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No other roofing material gives the architect the freedom in roofing design possible with Follansbee Terne Metal. Moreover, Terne Metal is remarkably durable, as proved by thousands of roofs still in service a half century and more. It's weathertight, windproof, fireproof and economical. It can be painted—any color, any time—to harmonize with the house exterior and surroundings.

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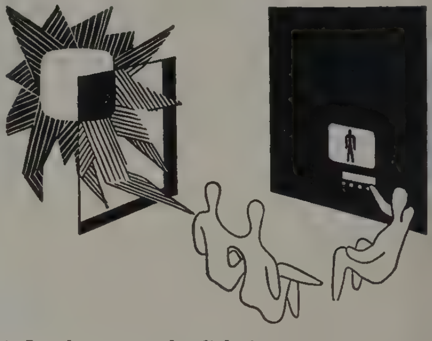
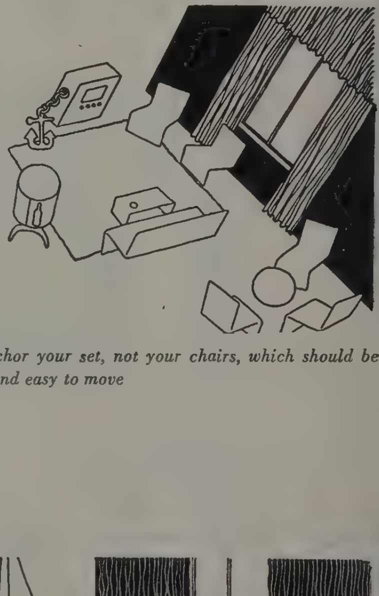
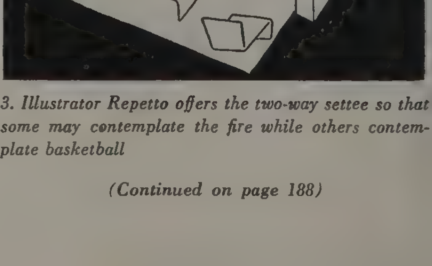
change the diameter of your television tube from inches to feet, and sit about there." Other tentative suggestions for television room arrangements are shown below.



1. Let the sun or other light in



2. Anchor your set, not your chairs, which should be light and easy to move



3. Illustrator Repetto offers the two-way settee so that some may contemplate the fire while others contemplate basketball

(Continued on page 188)

toward better understanding

Now, as never before, there is a need for a true picture abroad of life in the U. S. You can help create better understanding by sending copies of HOUSE & HOME (when you are through with them) to a friend or relative abroad, or to a U. S. Information Library.

HOUSE & HOME's editorial coverage—reporting trends and developments in design, construction, financing, new products, significant legislation, etc.—presents an authoritative and vital picture of the American way.

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WHAT "*Home Security*" MEANS TO HOME FINANCING

The health condition of a home buyer is an important personal credit factor in arranging home loan financing. Even more important than reasonable good health at the time the loan is made is continuing good health and earning power during the life of the loan.

It is good business to have other sources to tap when a health condition prevents a borrower from working. Woodmen Accident Company, through its "Home-Security" system of automatically insuring the borrower's ability to repay the loan, is an immediate and dependable source of funds to assist the meeting of monthly installments promptly when due. By providing indemnity at the rate of $50 a month, from the first fourteen days of disability up to sixty consecutive months, "Home-Security" dollars supply this extra fund which may be tapped in amounts from $50 to $3000 depending upon the term of each disability.

Simple, easy-to-handle, attractive to all parties to a home loan, "Home-Security" has gained wide acceptance. Home buyers and home financing firms alike are enthusiastic about "Home-Security." If your home financing firm does not now offer "Home-Security" service, detailed information is available by writing to

H. A. Atkinson, Director,
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Pella WINDOWS . . . WITH SCREENS THAT ROLL UP AND DOWN will earn credits for you year after year

ROLSCREENS, the original inconspicuous inside screens that roll up and down like window shades are standard equipment on Pella wood casement windows. Rolscreens have easy finger-tip operation. Never need to be stored, painted, put up or taken down.

NEAT, NARROW MULLIONS — When several Pella units are used in an opening, they join to form neat, narrow mullions. Special mullions in any angle available for bays.

DUAL GLAZING AND WEATHERSTRIPPING — Pella casements are DUAL GLAZED to insulate against winter cold and summer heat. Sash is equipped on all four sides with exclusive compression-type stainless steel weatherstripping to eliminate drafts. Air and dust infiltration is practically nil.

GLASS SIZES UP TO 24" x 60" — Pella offers stock-size units with glass sizes up to 24" wide by 60" high. Stock-size Pella wood casements are available to accommodate a wide variety of standard Thermopane and Twindow insulating glass.

ONLY A FEW MINUTES TO INSTALL — Pella wood casements are factory assembled and fitted into a 16-guage steel frame which surrounds each window unit. Come individually packaged, ready to place in rough wall openings. Weathertight installation can be completed in about 30 minutes' time. Mail coupon below for file set of Pella window details. Also see Pella Catalog in Sweet's Architectural File or Sweet's Builders' File.

Pella WOOD CASEMENT WINDOWS

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MADE BY MAKERS OF FAMOUS PELLA ROLSCREENS AND PELLA VENETIAN BLINDS.

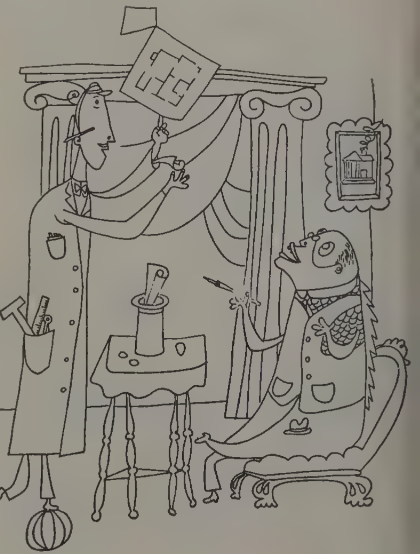
4. Have some other focus of attention to rest the eye

For the open plan living room, Schroeder points up the desirability of vertical as well as horizontal extension of space in a house with more than one story or in a duplex apartment.

The author firmly bucks the current tendency to merge living and dining space in the interests of economy. He contends that a separate or private dining area is essential—and not necessarily wasteful. "A dining room that can also be a library, a study, or a second living room (so important when there are growing children in the home) is within the imagination of any able designer." The room should be at least 10′ x 12′, but "a couple of extra feet all around would make it easier to laugh, take a deep breath, or carve a tough steak."

Satire and sound advice are combined in a concluding section describing five basic steps in client handling: 1) the Art of the Approach, or how to locate, stalk and trap a client . . . 2) the Art of the Interview, or how to find out what is on the client's mind . . . 3) Forestalling Sketch Fright, or how to soothe the client in the presence of preliminary plans . . . 4) the Grand Première, or how to present finished drawings with a flourish . . . 5) How to Talk About Money.

It is an unfortunate thing that the most important thing in any designer's office is a client.



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Now, concrete blocks get really lasting resistance to moisture and water seepage—with an easily applied coating system based on VINYLITE Brand Resins.

In basements that once leaked water to the floor in every rain, these remarkable paints have kept walls dry and gleaming white for more than a year. Applied to the exterior of a Cincinnati warehouse that was half inundated for nine days during a flood, there was no evidence of blistering, chalking, erosion, flaking, or map cracking.

Coatings based on VINYLITE Brand Resins are tops in their field for resisting weather, salt and corrosive atmospheres, oils, greases, alkalies, most strong acids.

Available in a wide range of colors, they cut maintenance costs by staying on the job far longer than older materials. They're highly recommended for concrete floors, bricks, stucco, cinder block and asbestos siding—for homes, apartments, factories, chemical plants.

They're the last word in providing dry, clean, attractive walls.

Ask us for a list of representative suppliers of concrete coatings based on VINYLITE Brand Resins. Write Dept. LG-14.

Data on concrete block coatings courtesy Perry & Derrick Co., 109 Corwine, Cincinnati, Ohio
Data on concrete floor coatings courtesy Benjamin Foster Co., 4635 W. Girard Ave., Philadelphia 31, Pennsylvania.

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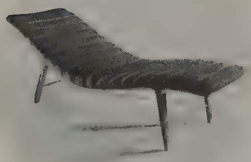
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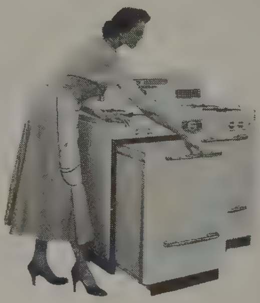
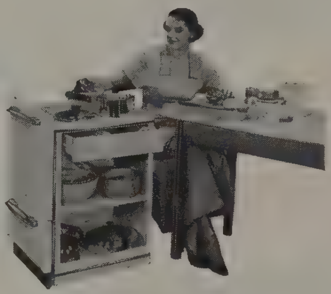
PRODUCT NEWS


A convenient grocery cart and extra work table for the kitchen, the Wheelabout stores neatly inside the gas range when not in use.


The top of the Wheelabout is a maple cutting board which is removable for washing. The two open storage shelves keep large cooking utensils handy.

GAS RANGE nests disappearing kitchen doll

Universal has cut up one of its standard ga ranges to add to its general utility around the kitchen. And "around the kitchen" it goes—a least a good part of it. By revamping the storag section in the Marlboro model, the company ha provided the homemaker with the *Wheelabout,* highly practical portable work table. The $3 premium above the regular $255 retail price o the range is about half the cost of other kitche carts of comparable construction; and the appliance's self-storage feature solves the shin-defyin problem of where to put such a unit in betwee its hours of usefulness. The over-all design of th table is sensible:

- Its maple cutting board top sets firmly insid metal ridges but lifts out easily for washing.
- The two accessible open compartments tota about 4⅔ cu. ft. of storage space—almost twic the capacity of conventional catchall drawers— and are topped by a handy utensil drawer.
- The cart front, like the range exterior, is finished in easy-to-clean titanium porcelain enamel the interior is coated with chip-resistant bake enamel.
- Mounted on wheels with self-lubricating doubl row bearings and fitted with a travel guide. th *Wheelabout* may be turned and rolled effortlessl in any direction. It slides into the range openin without juggling.

The range itself stands 44⅝″ high, includin the backsplash, and is 27⅞″ deep and 40″ wide It has a large oven and a drawer-type broiler Models are made for natural and bottled gas.

Industrial-design-conscious architects an kitchen planners might have two criticisms o the Marlboro: (1) the nonfunctioning lowe pull on the *Wheelaway*—included, no doubt, t match the broiler and modify new die-casting— not only relates the cart to fake highboy-fronte hope chests but also presents the housewife wit an unnecessary grit collector; and (2) the blacklined range looks lost without its white ename papoose. But these are minor objections tha will be drowned out by the kudos for a successfully flexible kitchen appliance.

Manufacturer: Cribben & Sexton Co., 700 N Sacramento Blvd., Chicago 12, Ill.

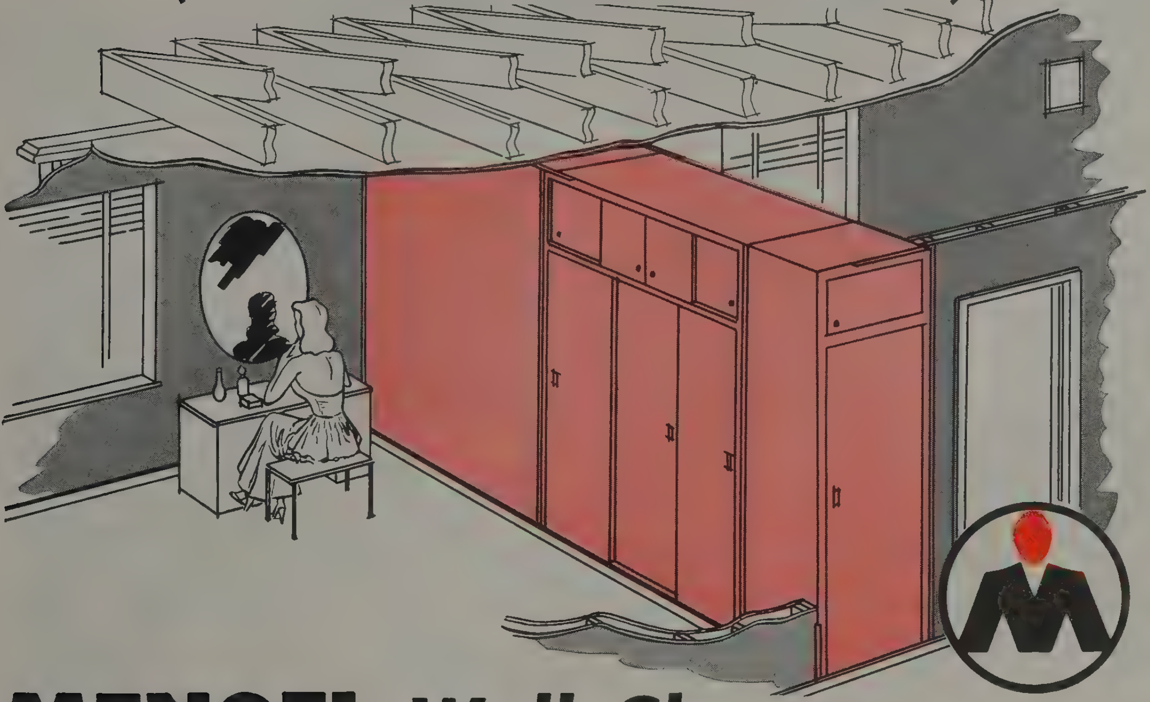
STOCK KITCHEN CABINETS made to fit built-i cooking appliances

Counter-top ranges and wall ovens work fine i the $20,000-plus house but plans for the budget-built home rarely include the custom cabinetr that necessarily surrounds base-less appliances This month Kitchen Maid became one of th first producers to offer ready-made cabinets t fit the flexible-use cooking tops and ovens mad by several companies. The storage units are designed to accommodate the cooking facilitie separately or in combination, and, like the res of the manufacturer's line, are constructed o processed hardwood. They are available in whit and six colors: light and medium green, yellow blue, sand and gray; and soon will be markete

(Continued on page 194)

BIGGER CLOSETS for LESS MONEY

(and an entire wall "for free"!)



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During the past two years, hundreds of architects and builders have *proved* that Mengel Wall Closets provide bigger, better closets at less cost than for conventional construction (and when used as complete partitions, *produce an entire wall, "free"!*)

Mengel Wall Closets are complete prefabricated sliding-door closets. The installation shown above is one of many possible combinations. Each bedroom is given a big 6′ closet, and the hall a 2′ linen closet — all full 24″ deep!

For the builder, this arrangement provides all the bedroom and linen closets for a two-bedroom home, plus the "bonus" of a 14-foot wall, *assembled and installed in as little as two hours!*

For the owner, Mengel Wall Closets mean larger, more accessible storage, scientifically designed to provide up to 40% more usable space than conventional closets. Easy-rolling sliding doors also save living space outside the closet. . . .

Get all the facts *today* on this easy, inexpensive, *modern* building improvement. Use the coupon for convenience.

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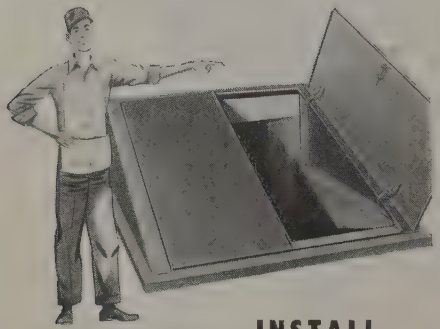
THE WAY TO
BETTER BASEMENTS



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CELLADOORS

and give your customers the only practical means of true basement efficiency . . . an accessible basement for moving furnishings, equipment and supplies. Extra room for deep freeze and laundry. Even an added rumpus room with insurance against fire and theft.

Better for you, too! A Bilco door can be hung in ten minutes or less when you are ready to pour the capping or side walls.

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ECONOMY—SAFETY
EASY INSTALLATION
SEE YOUR NEAREST BUILDING SUPPLY DEALER

THE BILCO COMPANY
111 HALLOCK AVE. NEW HAVEN, CONN.
Please send me more information
Name ____________
Address ____________
City ____________ State ____________

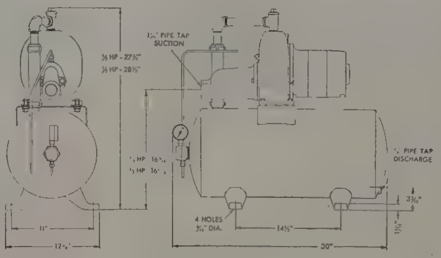
in the natural hardwood finish. List price for cabinets to fit *Chambers'* gas cooking top and oven is $203.90, including a plastic laminate counter top. Models for *Western Holly's* gas units sell for $256.50, with a plastic top, and for the *Universal* appliances, $160.60. Cabinets for the electrically operated *Thermador* and *Prestline* built-in ranges and ovens also will be available this spring.

Three Kitchen Maid cabinet arrangements pictured here are, clockwise, one for Chambers' oven and cooking top, one for Western Holly units, and one for Universal built-in facilities.

Manufacturer: The Kitchen Maid Corp., Andrews, Ind.

PACKAGED WATER SYSTEM easily converted from shallow to deep well operation

Delco's versatile water system for small homes may be used with either a shallow or deep well. Factory assembled, the compact new unit consists of a jet pump mounted on a 12 gal. galvanized-steel pressure tank. Installation is quite simple: the system is put into operation by making connections to suction and discharge lines and electrical lines. Available with a ⅓ h.p. motor at $149.50 and with a ½ h.p. motor at $158.25 (not installed) the unit has a capacity of 480 gal. per hr. up to 990 gal. at 20 lbs. pressure within the range of a 5′ to 20′ lift. It runs on 110 or 220 v. 60 cycle current. If the water level should fall after the unit is installed as a shallow well pump, it is reported to be converted



(Continued on page 196)

To Subscribers

When you move, please tell us at the earliest possible moment so that you may continue to receive copies of HOUSE & HOME without delay.

To expedite the change of address, send the old address as well as the new.

HOUSE & HOME
540 N. Michigan Avenue
Chicago 11, Illinois

Space-saving

STANLEY *SLIDING* DOOR HARDWARE

How to provide more livable area in today's small homes! Progressive architects and builders have found a way to lick this problem—a way to design homes for *maximum* living. Modern Stanley Sliding Door Hardware.

Home buyers like the convenience of interior doors that "disappear" into walls. It saves floor space, increases the *utility* of a room. Add the extra touch of Sliding Door Hardware by Stanley, and prospects are *completely* sold.

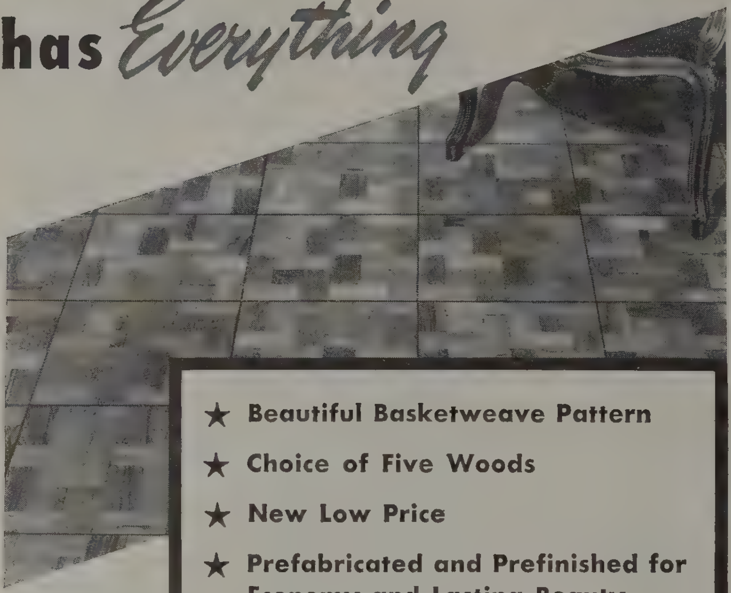
Doors glide smoothly, effortlessly over a V-shaped overhead track. Simple screw driver adjustment after installation without removing trim. Five sets of Stanley Hardware meet all home needs. Ask your hardware consultant for full details.

THE STANLEY WORKS, NEW BRITAIN, CONNECTICUT

STANLEY
Reg. U.S. Pat. Off.

HARDWARE • TOOLS • ELECTRIC TOOLS
STEEL STRAPPING • STEEL

PARKAY HADDON HALL
has Everything



★ Beautiful Basketweave Pattern
★ Choice of Five Woods
★ New Low Price
★ Prefabricated and Prefinished for Economy and Lasting Beauty

Even the modest home can now afford the floors of a mansion. It's Haddon Hall—a fine hardwood flooring whose distinctive basketweave design is a direct copy of the classic English pattern.

Parkay Haddon Hall is factory assembled in 12″ x 12″ beveled edged units composed of 2″x 4″ and 2″ x 2″ solid blocks ¼″ thick. The blocks making up each unit are selected to insure contrast of grain structure—then finished by proven factory methods for lasting beauty.

Haddon Hall flooring is applied with Parkay Adhesive to any sound, smooth subsurface—wood, concrete or terrazzo. The simplicity and cleanliness of installation are distinct advantages on new and remodeling jobs alike. Choice of five woods—light or medium finish Oak, Walnut, Avodire, Mahogany and Teak.

Price? Recent reductions bring the cost of Parkay Haddon Hall Pattern to a new low. Write for illustrated bulletin and name of nearest Parkay dealer. Parkay, Inc., Dept. H, Louisville 9, Ky.

PARKAY
READY-FINISHED HARDWOOD FOR FLOORS AND WALLS

easily and inexpensively to deep well usage fo lifts as high as 100′.

Manufacturer: Delco Appliance, Div. of Genera Motors Corp., Rochester 1, N. Y.

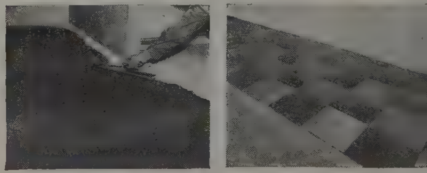
CLEAR OIL COATING dries to hard durabl finish

A synthetic oil finish for many kinds of surfaces, Liquid Raw-Hide Blond combines th soft luster of natural oil with the ruggedness o lacquer. It may be used on ceramic tile, linoleum, wood floors, paneling, interior trim an furniture. It dries dust-free in 40 minutes, har in two hours, and will produce a dull or glos finish, depending on the number of application —the more, the glossier. It sells for $5.65 pe gal.

Manufacturer: Linseed Oil Products Co., 35 Del Monte St., Pasadena, Calif.

RESILIENT UNDERLAYMENT is cushionin coat for concrete

Many are the homeowners who tread concret and tile-over-concrete with aching arches. Often although many prefer the easy-to-clean surface and economy of smooth flooring materials, the resort to carpeting for its comfort. A recentl developed underlayment, Plastic Mix, is reported not only to prepare porous and uneve surfaces for topcoats of tile, linoleum, woo etc., but also to add foot-comforting resilienc beneath many of the hard materials. It is sai to form a tight bond with any material and ca be used as a spot filler or adhesive beneath wal coverings. Tough and rubberlike, the compoun is moisture and vermin proof. It has a high tensile strength, and resists the impact of concentrated loads. Plastic Mix costs the builder abou 6¢ per sq. ft. in ¼″ thicknesses.



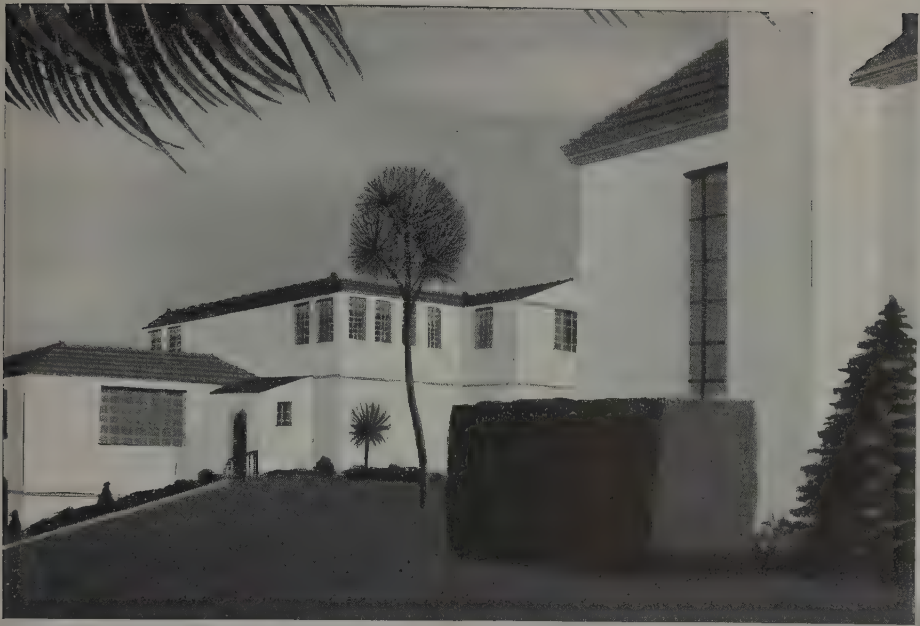
Manufacturer: Pioneer Latex and Chemical Co. Inc., Middlesex, N. J.

FAST DRYING SEALER can be used unde all types of paints

A pigmented sealer which dries to recoat i from two to four hours, Nu-Hue Quik-Sealer ca help many contractors meet the requirements o a two-coat job in a single day. The new coatin is said to provide an excellent seal on any interior surface—plaster, wallboard, masonry o brick—and may be used under flat or gloss paints It has a flat, easily paintable finish (unlike othe sealing coats which have a gloss to reveal spot requiring retouching, and are consequently harder to paint over). Quik-Sealer may be brushe or sprayed. It sells for $3.45 per gal. in 5 gal drums. One gal. covers about 500 to 600 sq. ft. depending on the porosity of the surface.

Manufacturer: The Martin Senour Co., Chicago

(Continued on page 198)



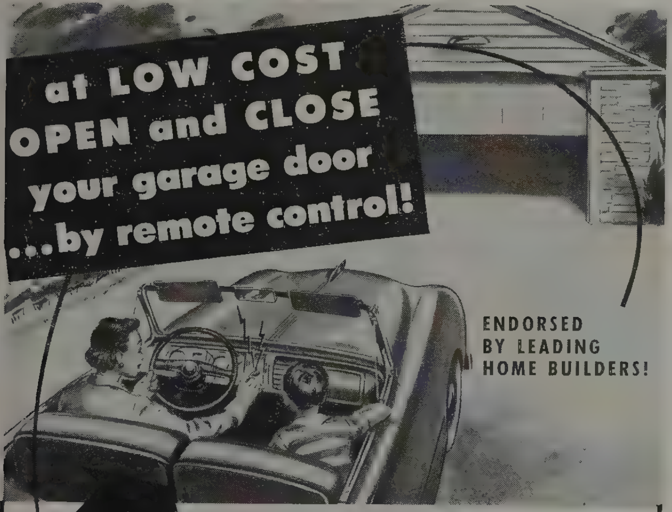
for distinctive homes and grounds

Trinity White

the whitest white portland cement

STUCCO AND CEMENT PAINT EXTERIORS • TERRAZZO
TERRACES, SUN PORCHES • POOLS • WHITE FLOORS FOR WORK
AND PLAY ROOMS • MASONRY LANDSCAPING DETAIL

A PRODUCT OF GENERAL PORTLAND CEMENT CO., CHICAGO, DALLAS, TAMPA, CHATTANOOGA, LOS ANGELES



PRESS A BUTTON in your car!

This modern appliance makes it possible for you to open and close your garage door — *without leaving your car!* This labor saving CRANE Door Operator makes the dark nights safer and eliminates bad weather annoyances. Simple in construction, this door opener is easy to operate! Press a small button in your car . . . the door opens and the floodlights come on to show you the way! Press it again . . . the door closes, locks and the lights go out! . . . The Crane Door Operator means safety and convenience for your family! Send for complete details . . . FREE!

FREE

H. W. CRANE CO.
1447 W. Lake Street
Chicago 7, Ill.

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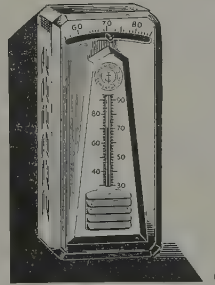
MERCOID

SENSATHERM



for Even Room Temperature Control

a natural in

GOOD ENGINEERING

It is governed by the changes in room temperature only.

It has the inherent sensitivity to react quickly from its surrounding temperature to maintain room comfort without the aid of artificial stimulation.

It incorporates a Mercoid magnetic mercury contact switch—an assurance of long trouble-free service.

In appearance, its design and lustrous champagne tone finish is a gem on the wall of any interior decoration where it reflects its own environment. So easy to keep clean—a damp cloth with a little soap quickly removes all specks, dirt, etc. It does not tarnish or discolor with age and will remain permanently beautiful and new looking.

Experience among householders over the years has demonstrated that the Mercoid Sensatherm is meeting with general all around satisfaction. Since the day it made its advent in the automatic heating field there has been an ever increasing demand for this fine instrument

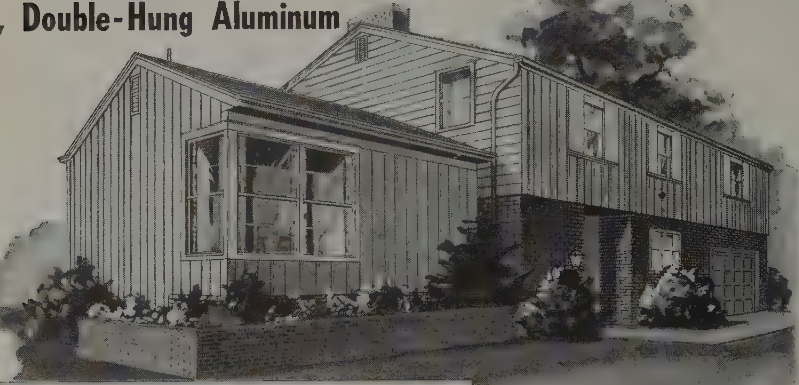
It rests on its own record of dependable performance.
Write for new, complete catalog
THE MERCOID CORPORATION ✱ 4201 BELMONT AV., CHICAGO 41, ILL.

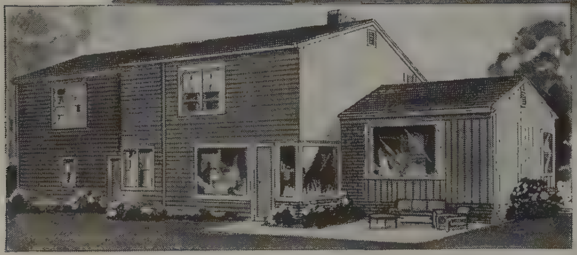
THIS BEAUTIFUL NEW HOME HAS

AMERICA'S FINEST WINDOWS

Fleetlite

Double, Double-Hung Aluminum

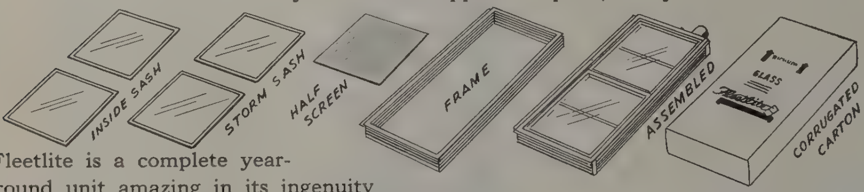




71 Saratoga Road
Eggertsville
(Buffalo, New York suburb)
Highland & Highland
Architects

To Contribute Modern Beauty
Reduce Building Time
Provide Living Comfort
Ease Housekeeping

A Fleetlite Window is different — all parts are manufactured and assembled in the factory and it is shipped complete, ready to install.



Fleetlite is a complete year-'round unit amazing in its ingenuity of design and in the benefits it offers home builders and home owners.

OVER 500 CONTRACT-BUILT HOMES IN THE BUFFALO AREA

. . . and thousands throughout the country are now equipped with Fleetlite windows. Owners are delighted with the beauty, convenience and everlasting investment value.

They appreciate the freedom from the chore of removing, storing and reinstalling storm sash and screen. They like the way Fleetlite sash snap out for cleaning. For warmer winters and cooler summers.

WRITE TODAY
for complete literature on
Fleetlite Windows

Fleetlite
AMERICA'S Finest WINDOW

As advertised in House Beautiful, House and Garden, Small Homes Guide, American Builder. Practical Builder, Architectural Forum, and Sweets Architectural File.

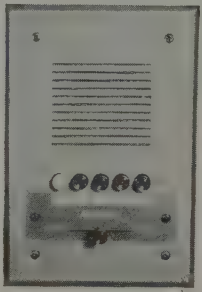
Made by . . .

FLEET OF AMERICA, INC., 102 PEARL STREET, BUFFALO, N.Y.

PRODUCT NEWS

INTERCOM SYSTEM made for home use

Anyone familiar with push-button office procedure (or even cinematic versions of "Miss Jones I want you") is aware of the convenience of remaining parked in a chair while conducting interoffice business through a neat table set. Carried into the home, intercom stations obviously can save legwork, contribute materially to efficient household management, and—less obviously but important architecturally—enhance the workability of sprawling single-story as well as multilevel floor plans. Realizing the home potential, Executone Inc., well known in the field of business intercommunication devices, is marketing a quality system specifically engineered for residential use. Neat 6″ x 9″ room stations, placed strategically throughout and outside the house, operate through a central amplifier—an economic advantage over business systems which utilize individual amplifiers for conversational privacy. The stations may be turned on when needed or left open; the 110 alternating or direct current consumed is equal to that of a 25 w. lamp bulb. Thus, parents involved in a small slam vulnerable can keep ears cocked to the nursery; and salesmen may be interviewed discreetly from the bedroom by madame *en deshabille.* The stations may be recessed in the wall or surface-mounted. Although the "selective call and talk" room stations communicate with any of four other stations in the system, they can be hooked up to assure intraroom privacy. Remote stations may be used in any location. Because they do not permit origination of a call, these units are recommended for use at entrances. A weatherproof station of the remote type is available for outdoor installations. Prices of the stations range from $19 to $32. The central amplifier, housed in a ventilated metal case 9¼″ long x 6″ wide x 6½″ high, sells for $45. Junction boxes range from $6.50 to $14.50. A basic setup of amplifier, three stations and a junction box costs about $125; installed prices of course vary with the number of stations utilized.



Manufacturer: Executone, Inc., 415 Lexington Ave., New York 17, N. Y.

(Continued on page 200)

The *only* pearl seat that will not fade, peel, or tear. The Olsonite pearlescent seat is solid one-piece construction *without* sheet covering of any kind. Available in 32 colors and white and black.

SOLID Olsonite

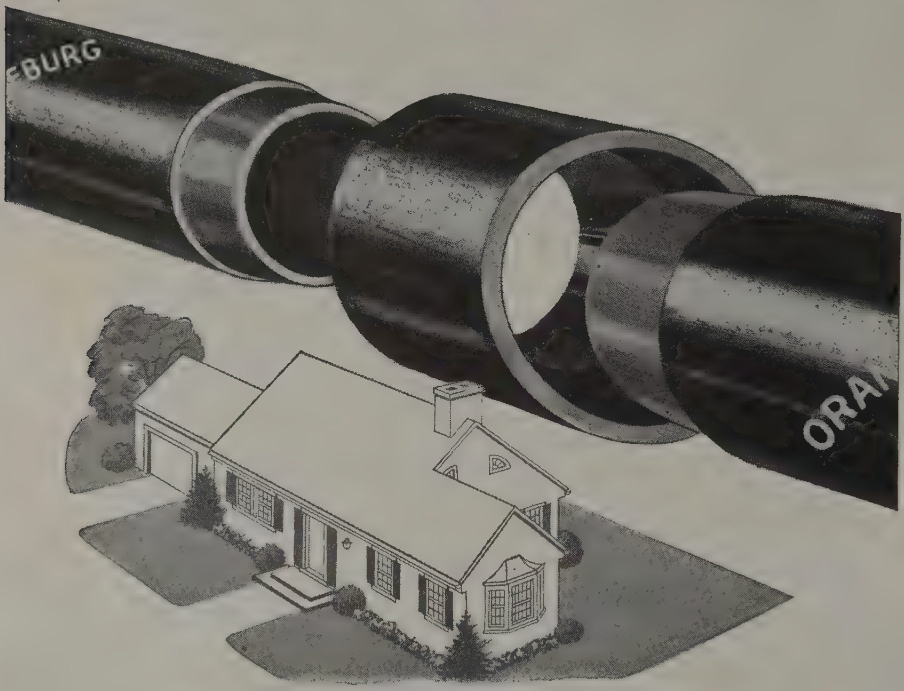
PEARLESCENT SEATS

NOT HOLLOW • NOT CONCAVE • NOT CORED—BUT SOLID OLSONITE

SWEDISH CRUCIBLE STEEL CO.
PLASTICS DIVISION
8561 BUTLER AVENUE • DETROIT 11, MICHIGAN

P-3

ROOT-PROOF JOINTS



ORANGEBURG®

PIPE AND FITTINGS

More and more Architects, Engineers and Builders turn to Orangeburg Sewer Pipe and Fittings for root-proof, sanitary installations. And since a sewer pipe is only as root-proof as its joints, Orangeburg originated TAPERWELD® JOINTS to seal pipe and fittings permanently against root entry, infiltration or leakage.

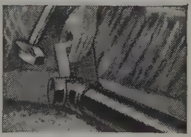
Root Prevention for Entire Pipe Line

Orangeburg assures it. That's why Orangeburg Pipe is extensively used in House-to-Sewer (or Septic Tank) connections; downspouts, storm drains; tight-joining drainage lines; conducting potable water supply—all non-pressure outside uses.

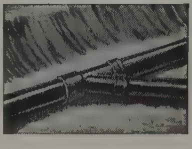
Orangeburg Insures a Quality Installation

Orangeburg is non-metallic, resilient. It resists acids, alkalies, salts, oils, greases and gases found in sewage wastes and soils. No cement or compounds are needed.

House-Sewer


Conductor Lines

Storm Drains



Eight foot lengths are easy to install. Orangeburg fittings—⅛ and ¼ Bends and Wyes—are made of Orangeburg material and tooled for Taperweld Joints.

Many Uses also for Orangeburg *Perforated* Pipe

...including Septic Tank disposal fields; foundation footing drains; draining wet spots in lawns, drive-in theaters, athletic fields, parking lots, airports, etc. Orangeburg Snap Couplings keep pipe in line, prevent silting at the joints. The new Orangeburg Fittings are also widely used with Orangeburg Perforated Pipe.

Remember—Orangeburg originated this *modern* pipe. Pipe and fittings are stamped with the Orangeburg trademark. For your protection, specify Orangeburg—*the original!*

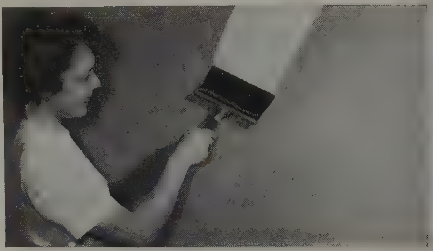
SEND FOR NEW CATALOG *306-MB1*, for important data.

ORANGEBURG MANUFACTURING COMPANY, INC., ORANGEBURG, NEW YORK

PRODUCT NEWS

PAINT BRUSH restyled for easy use

Until last month, paint brushes—like Cervantes' cats by night—all looked alike. Most were made of hog's bristles, some of nylon, but the product styling was the same, and unless one was expert they dripped without much provocation. Because the consumer buys most of the interior paint produced each year, Pittsburgh Plate Glass Co. (manufacturer of paint as well as glass) revamped the brush for the hot little palm of the homemaker; but there is no reason why this efficient tool cannot be utilized by the building industry. Called the *Fleetwing Wall Coater*, the device features pre-tapered synthetic bristles locked in two 7″ wide metal channels. The handle is longer than conventional to permit an easy free-swinging stroke, and the built-in paint reservoir permits coverage of a large area with a single dip. The brush may be used for applying any type of flat or gloss wall paint, latex (rubberized), resin emulsion or other water-thinned paints. Its retail price is $3.69.



Manufacturer: Pittsburgh Plate Glass Co., 632 Duquesne Way, Pittsburgh, Pa.

TEMPLET cuts door hanging time

By utilizing the Hinge Butt Templet, builders can eliminate many hours of costly hand labor involved in cutting hinge butts for doors and jambs. Even an inexperienced carpenter can mortise a butt with this new device in less than two minutes, and can route all the doors for an average house in about two hours. Not only is the templet a time saver, it also assures accurate alignment and hanging of any wood door up to 7′ high. Settings for hinges 2½″ to 5½″ long are read directly from tables on the instrument, thereby reducing the possibility of measurement errors. After it is adjusted to the size of the door or jamb, the templet is locked in position and a router used to produce a clean mortise of the correct size and depth. Measuring 63″ long when extended, 1¾″ high and 4″ wide, the templet weighs less than 4 lbs. and telescopes to fit into a small metal carrying case. It is priced at $34.50.

Manufacturer: Porter Cable Machine Co., Syracuse 8, N. Y.

(Continued on page 202)

Make Rooms Roomier!

with STEELCRAFT

SPACEMAKER

STEEL SLIDING CLOSET DOORS

End "lost" room space ordinarily taken up by clumsy swinging doors . . . make every bit of closet space easy to reach . . . actually cut construction cost!

★

STEELCRAFT "Spacemaker" Steel Sliding Closet Doors are packaged in individual cartons with all necessary hardware and instructions for installing. They can be purchased with steel casing if desired. The Steelcraft Steel Casing is shipped as a complete one-piece welded assembly.

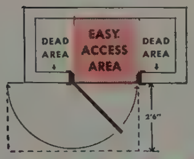
★

STEELCRAFT "Spacemaker" Steel Sliding Closet Doors offer these supreme advantages—to builders in building—to householders in using:—

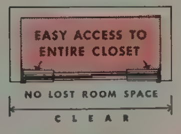
- **Made Entirely of Steel** . . . trouble-free operation is assured. Won't stick, warp or sag.
- **Easy to Install** . . . no field cutting or fitting for hinges or hardware.
- **Silent** . . . glide on ball-bearing rollers.
- **Bonderized, Flo-Coat Painted and Baked** . . . permanently protected . . . satin-smooth surface takes any desired finish or color.

The Modern Way for Making Closet Space Completely Accessible.

Old-fashioned Method



Steelcraft Spacemaker Method



MAIL THIS COUPON TODAY

STEELCRAFT
MANUFACTURING COMPANY
ROSSMOYNE OHIO—IN GREATER CINCINNATI

Important Economy News For Builders

By using Steelcraft "Spacemaker" Steel Sliding Closet Doors instead of old-fashioned swinging doors, you can reduce room size yet still have the same useable area. And you save the difference in cost of material and labor.

OTHER STEELCRAFT QUALITY BUILDING PRODUCTS • Steel Residence Casements
Steel Basement & Utility Windows • Steel Door Frames

THE STEELCRAFT MANUFACTURING CO., Dept. MB-351
9250 Blue Ash Road—Rossmoyne, Ohio (In Greater Cincinnati)

Please send me full information on Steelcraft SPACEMAKER Sliding Steel Doors.

Name____________________
Company____________________
Business Address____________________
City____________Zone______State______
My Position____________Type of Business____________

BATH ENCLOSURE
Cascade
BEAUTIFUL
COLORFUL
PRACTICAL

An entirely new concept in bath enclosures. Rigid sliding panels of Plexiglas in beautiful transparent pastel colors of crystal clarity: Pink, Gold and Crystal Clear.

Can be installed at a cost much less than a glass panel enclosure.

Plexiglas is shatterproof, withstands heat, resists water and has strength far beyond requirements present in the home bathroom.

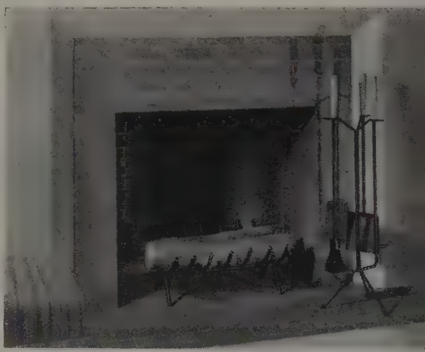
Simple to install: (1) Cement track to rim of tub, (2) rest panels in track and adjust top rod in position, (3) fasten end plates of top rod and the job is finished. Made to fit a regular 5 foot recessed tub.

Available from your plumbing contractor.

Write for bulletin showing the Cascade Bath Enclosure in actual colors.

FIAT

FIAT METAL MANUFACTURING COMPANY • *Three Complete Plants*
(Chicago area plant) Franklin Park, Illinois • Long Island City 1, New York
Los Angeles 33, Calif. • In Canada: Porcelain and Metal Products, Ltd., Orillia, Ontario

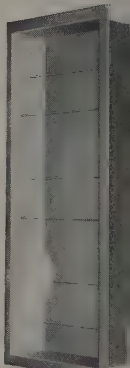


CONTEMPORARY FIREPLACE ACCESSORIES are modestly priced

The two frankly contemporary but unpretentiou fireplace accessories pictured above are part o a collection designed by George Nelson for th Howard Miller Clock Co. The concave rib fire basket guides the logs together to encourage a good fire. The birch-handled tool set is available with a floor standard at $25 and with a wall-mounted plate for $19.50. Other items i the group are a colored canvas log carrier with a birch and rope handle, a combination andiron grate suitable for wood or coal fires, and fou simple andirons ranging in price from $10 t $19.50 a pair. Made of steel and iron, the piece have cleanly welded joints and a smooth blac finish.

Distributor: Richards-Morganthau, 225 Fift Ave., New York, N. Y.

WALL-RECESSED SHOE RACK fits betwee studs



Utilizing in-the-wall space for storage, this convenient shoe container fits neatly between the studs. Built of heavy, gauge galvanized and bonderized steel, the rack is finished in white baked enamel. Its wide 1¼″ lip covers any uneven or rough edges around the wall opening, and so may be installed during new construction or in existing homes. Its inside dimensions are: 13¾″ wide, 3′ high, and 3¾″ deep. It holds up to nine pairs of shoes (women's) on three tiers of horizontal rods. The rack retails for $3.98.

Manufacturer: Leigh Building Products Div., Air Con-Trol Products Inc., Coopersville, Mich.

AUTOMATIC DRAWING INSTRUMENT produces continuous straight lines

The Locktite graphite lead drafting instrument permits the drawing of continuous uniform straight lines without twirling the point. It has a flat thin chisel-tipped lead held firmly in an internal clamp device, and never needs sharpening or sanding. The instrument is available in HB, F, and 2H to 9H hardness. It sells for $2.

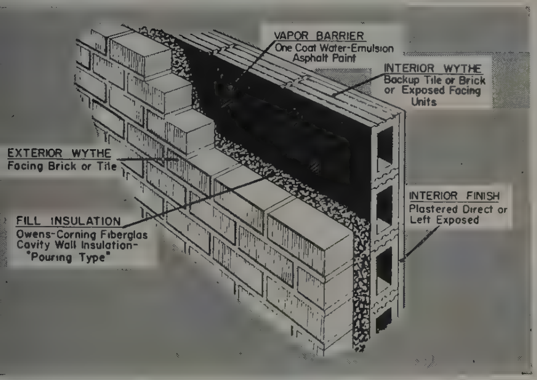
Manufacturer: A. W. Faber Casteel Pencil Co., Newark, N. J.

(Technical Publications on page 206)

GIVE YOUR HOUSES ADDED SALES APPEAL AT LESS COST...

WITH SCR* INSULATED CAVITY WALL

using Fiberglas** Cavity Wall Insulation—Pouring Type


VAPOR BARRIER
One Coat Water-Emulsion Asphalt Paint
INTERIOR WYTHE
Backup Tile or Brick or Exposed Facing Units
EXTERIOR WYTHE
Facing Brick or Tile
INTERIOR FINISH
Plastered Direct or Left Exposed
FILL INSULATION
Owens-Corning Fiberglas Cavity Wall Insulation- "Pouring Type"

It's highly moisture-resistant — The SCR Insulated Cavity Wall gives protection against water penetration. Weep holes ⅜" diameter every two feet provide drainage for the cavity.

It's fully insulated — "Fiberglas Cavity Wall Insulation — Pouring Type" was especially developed by Owens-Corning Fiberglas Corporation to meet the specific requirements of this new wall. Its excellent insulating properties (tests show wall has U value of .12) *plus* ease in pouring, lightness, and resistance to settling and moisture absorption make it ideal for SCR Insulated Cavity Wall construction.

It requires no furring, lathing or even plaster — That's why you can build *better* and *cheaper* with SCR Insulated Cavity Walls and still offer your prospects a *greater* plus in construction value over uninsulated walls that have been furred and lathed. And remember, this *new* cavity wall construction requires no revision in structural design — no changes to meet building code specifications.

For technical details and specifications, or exact "how to build it" information, write us at Dept. MB-1 on your own letterhead.

NEW FRONTIERS
SCR
FOR BRICK AND TILE

*Trade-mark, Structural Clay Products Research Foundation
**Trade-mark, Owens-Corning Fiberglas Corporation

SCPI
STRUCTURAL CLAY PRODUCTS INSTITUTE

MAIN OFFICE
STRUCTURAL CLAY PRODUCTS INSTITUTE
1520 18th Street, N. W., Washington 6, D. C.

Nail down building costs with PlyScord® Subflooring

THE REAL STORY of construction costs isn't always shown on the bill of materials. It's the *applied* cost that counts! PlyScord subflooring can be laid in less than half the time required for lumber subflooring. Big, work-speeding panels are light, easy to handle . . . cover large areas quickly . . . fit standard joist spacing without wasteful sawing and fitting . . . require far fewer nails.

PlyScord subflooring means *better* construction, too. Plywood's rigid plate-like action protects against violent racking action of wind or earthquake. Strong, rigid panels provide a solid, squeak-free base for finish flooring . . . protect against drafts from below. PlyScord subfloors won't cup, shrink or swell. Result: finish floors look better, last longer.

Plan now to include PlyScord in your next bill of materials—for better construction, for building economy.

Douglas Fir
Plywood
AMERICA'S BUSIEST BUILDING MATERIAL

® PlyScord is the unsanded construction grade of Interior-type plywood bonded with highly water resistant glues. For subflooring, sheathing, backing, one-use forms. PlyScord is a registered grade-trademark identifying quality plywood manufactured in accord with U. S. Commercial Standards and inspected by Douglas Fir Plywood Association (DFPA).

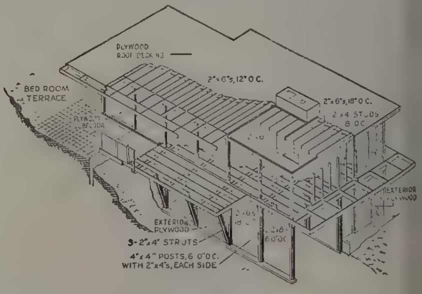
PANEL DISCUSSION

Plywood Creates Unusual Home

An excellent example of how well Douglas fir plywood lends itself to contemporary design is this award-winning California home by Architect Gordon Drake of Carmel and San Francisco.

"Because plywood is at once a structural material and a finish material, offering both strength and beauty, plywood made possible many building economies in the house," explains Architect Drake. "The material permits new architectural concept which enables the designer to concentrate on essentials without sacrificing beauty, charm or utility."

Plywood imparts needed structural strength and rigidity to the seemingly fragile structure and also serves as attractive exterior siding and interior wall paneling. The isometric shows post and girder construction which employs plywood as structural diaphragm for floor and roof and as structural skin for walls.



Shelf-Door Wardrobe

Complete plans and bill of materials for the shelf-door wardrobe which was awarded first prize in the national architectural contest for plywood built-ins may be obtained free of charge from Douglas Fir Plywood Association, Tacoma 2, Wash. Designed by Edward Hanson, Stillwater, Minn., the plywood built-in makes use of shelves and bins on the inner door faces to provide extra storage space. Drawer space is provided both below the main unit and inside the roomy wardrobe section.

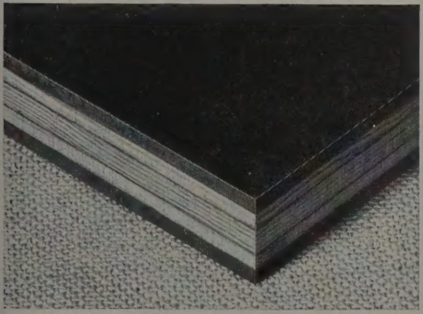
Prefabricator Cuts Costs With Plywood

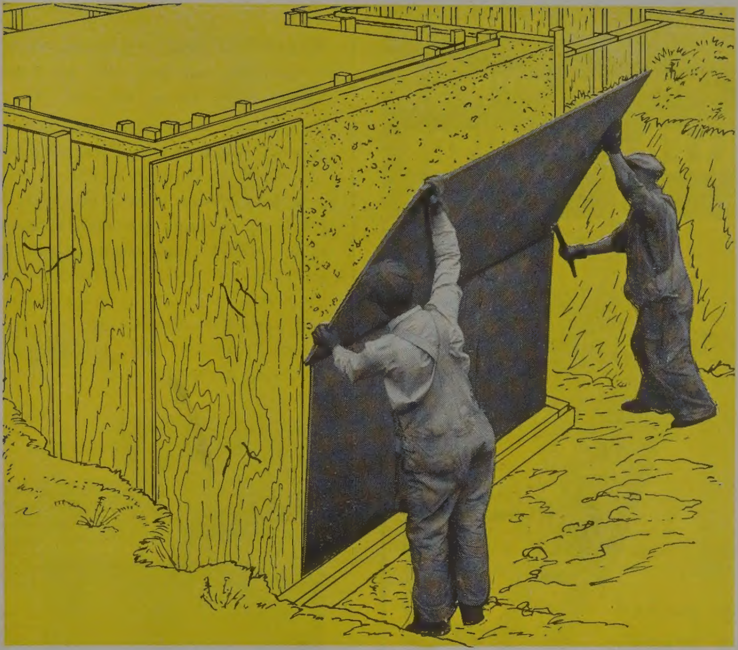
Douglas fir plywood, which has been synonymous with prefabrication since 1935 when the first "stressed skin" plywood house was built by the U.S. Forest Products Laboratory, today remains the leading material for line production of modern housing.

Evidencing this fact are the comments of H. Arthur Tucker of Southern Mill & Manufacturing Co., Tulsa, Okla. The firm is one of the nation's pioneer prefabricators, having mass-produced houses for over 32 years—largely for petroleum industry housing projects. Says Tucker of plywood: "Plywood wall and roof sheathing and subflooring are, of course, far stronger and more rigid than other materials. But it cuts costs, too. Plywood wall and roof sheathing cost about 85% as much as 1″ boards and can be installed in 40% fewer man hours. Considering time, labor and material savings, plywood subfloors cost less, too. Plywood's light weight means an average savings of $30 to $50 per house in shipping costs and greatly speeds site assembly."

New Panel Material

West Coast plywood manufacturers are now mass-producing a new panel material which combines smooth, hard, wear-resistant hardboard surfaces with a backbone of Douglas fir plywood. Named Plyron, the material has already proved successful for such diverse uses as cabinets, concrete forms and flooring. Faced with hardboard which provides an ideal base for smooth paint finishes, Plyron relies on plywood inner construction to furnish the "muscle," making it puncture-proof, dimensionally stable and relatively light weight. The material has excellent nail holding properties and retains the easy workability of plywood. Rigid industry quality standards have been established for Plyron, similar to those for Douglas fir plywood.





Bargain Basements-Easy with Double-Duty PlyScord® Forms

Put a *two-way* squeeze on building costs by using the PlyScord grade plywood first for concrete formwork, then for sheathing or subfloors. PlyScord saves form-work time and labor costs . . . creates attractive, fin-free concrete surfaces—especially important for inner basement walls, retaining walls and exposed concrete on hillside homes.

After use as form panels, use PlyScord for strong, rigid wall and roof sheathing . . . tight, firm subfloors . . . or backing for thinner, more-expensive wall paneling. PlyScord cuts costs here, too. Big panels speed application of subflooring by 50% . . . wall and roof sheathing by 25%.

The highly water resistant (but *not* waterproof) glues used in PlyScord easily withstand use as one-use forms or other occasional wetting on the job. PlyScord is light, strong, amazingly tough. Won't split or puncture. Big, exact size sheets reduce waste . . . work with ordinary tools.

Douglas Fir Plywood

AMERICA'S BUSIEST BUILDING MATERIAL

Genuine Douglas Fir Plywood PLYSCORD ® SHEATHING DFPA INSPECTED

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PRECISION

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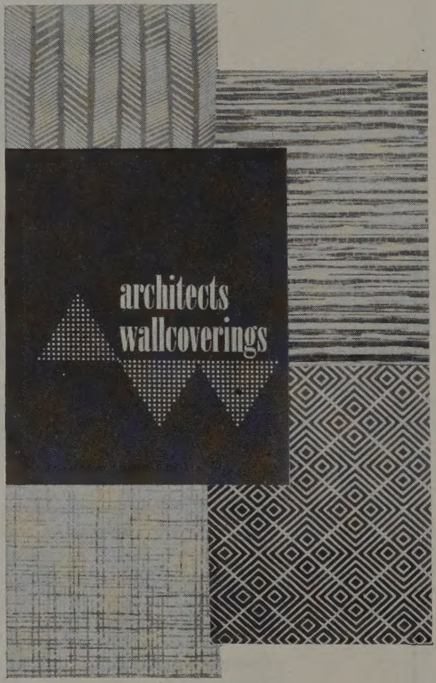
TECHNICAL PUBLICATIONS

WALLCOVERINGS. Architects Wallcoverings. Architects Wallcoverings, Inc., 250 Fifth Ave., New York 1, N. Y. 300 pp. 8½ x 11". $5.

Operating a specialized and glamorous kind of Sears-Roebuck service, Architects Wallcoverings, Inc. enables a designer to choose and order wallcoverings without leaving his office. The fat sample book contains generous swatches of handsome wallcoverings made by several firms. A selective collection, it includes durable paper-backed fabrics such as grass cloth and burlap, and washable materials and papers in neat geometric patterns and textured solid colors. Arranged according to color rather than manufacturer, the book should save architects and decorators countless hours of wading through Louisiana swamp moss, Humpty Dumpty, and kitchen pan motifs. Retail prices, noted on the back of each leaf, run from $1.50 to $15 per roll. Architects Wallcoverings, Inc. extends professional discounts, and the initial cost of the sample book is refunded on wallcovering purchases amounting to $200 or more.



HARDBOARDS. Masonite Hardboards in Architectural Design and Construction. Masonite Corp., 111 W. Washington St., Chicago 2, Ill. 24 pp. 8½ x 11".

Well organized and attractively illustrated, this specifications book contains information on the physical properties of various thicknesses and types of hardboards. Its discussion of their numerous uses in architectural design and construction should serve as a convenient guide for proper application and finishing of the Masonite products.

(Continued on page 210)

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There's more than one way to build a strong America...

And this familiar emblem of the Advertising Council has done its share superbly. For the past ten years you've seen it in magazines, in newspapers and in posters, always with an urgent message to all the American people. And time and again you've responded with typical American warmth.

In the first dark days of World War II, when civilians needed to be shown how they too could help win the war, a group of volunteer businessmen set up the Advertising Council to mobilize Americans for the jobs that needed to be done. The Council is an independent non-profit, non-partisan organization composed largely of advertisers, advertising agencies and media, including magazines, newspapers, radio and television, the outdoor and transportation advertising groups.

Millions of messages over the Council's emblem have helped conserve scarce metals . . . helped prevent costly forest fires and save vast stores of timber . . . helped unite public opinion behind the drive for better schools . . . helped promote highway safety, just as they are helping today to collect blood for wounded soldiers in Korea.

Over a billion dollars in advertising space and time have been given freely by American business to spread these appeals. And countless Americans have participated in every campaign the Council launched. Now, on its tenth anniversary, the Advertising Council is ready to accept tomorrow's challenge, knowing it can count on you to support its future programs as you have met the nation's needs in the past.

This advertisement is contributed by

THE MAGAZINE OF BUILDING

as a public service

Although there are more picnickers and campers present in the woods each year, the number of forest fires has been cut by about 100,000 annually. When the campaign began there were more than 200,000 destructive forest fires per year, most of them caused by human carelessness. Smoky has helped us all to be more careful and prevent such waste.

Take your time - not your life!
Don't Jaywalk - the life you save may be your own!

The posters you see along the thoroughfares and in your transportation vehicles often carry messages in the public interest. Posters like this have helped to cut down percentage of fatal accidents to miles traveled. The space is given by the Outdoor and Transportation advertising industry.

What YOU Can Do . . . MUST Do
To Ease the Critical Iron and Steel Scrap Problem

When scrap is needed quickly to keep our defense plants rolling, ads like this, sponsored by leading business and trade publications, help make that need known.

CARE
USA
Send Another Package Overseas Today!

The posters you see along the thoroughfares and in your busses and trains often carry messages in the public interest — a reminder to send a CARE package abroad, a plea for better schools, or a warning about traffic accidents.

The house magazines of hundreds of leading companies carry ads like this regularly to remind us all that the better we produce the stronger we grow.

Give Your Houses
Extra Sales Appeal

SPECIFY
Rittenhouse
DOOR CHIMES

Many items in new houses formerly regarded as "extras" are now virtually standard equipment, because they give added sales appeal. Take door chimes, for example. Seven out of 10 new houses being built today will have door chimes.*

For the houses you build, specify Rittenhouse Door Chimes. Rittenhouse Chimes are outstanding in value and popularity. Beautiful styling, melodious, golden tones, rugged construction, and trouble-free performance make Rittenhouse Chimes America's finest entrance signals. There's a Rittenhouse Chime for every type home from cottage to mansion. Fourteen models to choose from. List priced from $4.25 to $116.00, with attractive discounts.

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**According to a recent survey by a building magazine, 7 out of 10 builders install door chimes in the homes they build.*

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TECHNICAL PUBLICATIONS

BASEMENT CONSTRUCTION. How to Make Basements Dry, Beautiful and Livable. Medusa Portland Cement Co., Box 5151, Cleveland 15, Ohio. 30 pp. 8½ x 11". 50¢ (no charge to building professionals).

Basement design problems are carefully analyzed in this booklet. Plans illustrating basement layout and isometric cutaway views of recommended foundation construction should be very useful to home designers and builders. The publication also describes methods of finishing basement rooms, and suggests materials for correcting mildly, moderately and severely damp conditions. (Here, the definitions of the various degrees of dampness are explicit.) It also discusses proper drainage systems. Candidly—and with good reason—the book interjects warnings against the panacea coatings currently being trumpeted to water-plagued homeowners who are unfamiliar with the wiles of hydrostatic pressure. In a gracious understatement, the manufacturer points out that such coatings have proved unsatisfactory in most instances and suggests that a dry basement can be assured only through good construction and intelligent selection of a site.

HEATING CONTROLS. B & G Comfort Control System, Bulletin No. DY-151. Bell & Gossett Co., Morton Grove, Ill. 6 pp. 8½ x 11".

The bulletin describes a thermostatic control for hot water heating systems which automatically adjusts the heating rate to compensate for different wind velocities as well as changes in outdoor temperature. Diagrams and photographs illustrate the regulator's operation and installation procedure.

BUILT-IN FURNITURE. Rendevous Room, Malarkey House. M & M Wood Working Co., Portland 17, Ore. 8 pp. 8½ x 11".

Ten suggestions for built-in plywood recreation and guest room furniture are illustrated and detailed in the latest Malarkey booklet. A floor plan of a room containing all ten items and complete material specifications for each piece are included. The publication also announces production of rift grain redwood, M & M's new plywood for interior and exterior applications. Other publications in the series include: *16 Step and Bend Saving Kitchen Ideas, 8 Convenient Master Bedroom Features, and Handy Wardrobe Closet for Growing Child.*

PREFABRICATED HOMES. Build Better, Build Sooner with Prefabrication. Prefabricated Home Manufacturers' Institute. 908-20th St., N. W., Washington 6, D. C. 16 pp. 8½ x 11".

Offering speedy erection and subsequent labor economies, prefabrication makes it possible for builders to provide higher quality homes for the low cost market. This booklet points out how the home buyer as well as the builder, mortgage lender and housing official all profit from prefabrication. Many types of prefabricated homes are illustrated and the capacities and services of the industry are described briefly.

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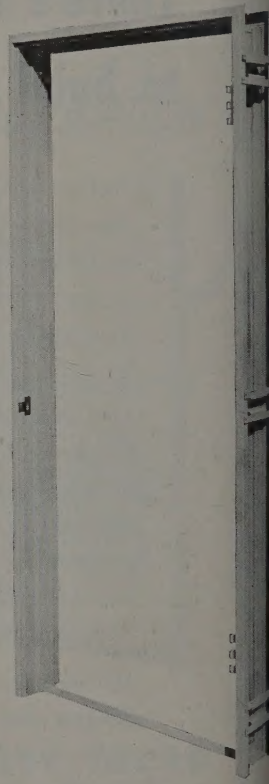

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